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Electromagnetic Emissions Test Report and Application for Grant of Equipment Authorization pursuant to Industry Canada RSS-Gen Issue 1 / RSS 210 Issue 6 FCC Part 15 Subpart C on the Cisco-Linksys Transmitter Model: WRT600N

UPN:	3839A-WRT6NV11
FCC ID:	Q87-WRT600NV11
GRANTEE:	Cisco-Linksys 121 Theory Drive Irvine, CA 92617
TEST SITE:	Elliott Laboratories, Inc. 684 W. Maude Ave Sunnyvale, CA 94086
REPORT DATE:	April 6, 2007
FINAL TEST DATE:	March 20, March 22, March 26, March 27 and March 28, 2007
AUTHORIZED SIGNATORY:	Juan Martinez Senior EMC Engineer

ACCREDITED
2016-01

REVISION HISTORY

Revision #	Date	Comments	Modified By
1	April 10, 2007	Initial Release	David Guidotti

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SCOPE

An electromagnetic emissions test has been performed on the Cisco-Linksys LLC model WRT600N pursuant to the following rules:

Industry Canada RSS-Gen Issue 1
RSS 210 Issue 6 "Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment"
FCC Part 15 Subpart C

Conducted and radiated emissions data has been collected, reduced, and analyzed within this report in accordance with measurement guidelines set forth in the following reference standards and as outlined in Elliott Laboratories test procedures:

ANSI C63.4:2003
RSS-212 Issue 1 Test Facilities and Test Methods for Radio Equipment

The intentional radiator above has been tested in a simulated typical installation to demonstrate compliance with the relevant Industry Canada performance and procedural standards.

Final system data was gathered in a mode that tended to maximize emissions by varying orientation of EUT, orientation of power and I/O cabling, antenna search height, and antenna polarization.

Every practical effort was made to perform an impartial test using appropriate test equipment of known calibration. All pertinent factors have been applied to reach the determination of compliance.

The test results recorded herein are based on a single type test of the Cisco-Linksys LLC model WRT600N and therefore apply only to the tested sample. The sample was selected and prepared by Jennifer Yu of Cisco-Linksys

OBJECTIVE

The primary objective of the manufacturer is compliance with the regulations outlined in the previous section.

Prior to marketing in the USA, all unlicensed transmitters and transceivers require certification. Receive-only devices operating between 30 MHz and 960 MHz are subject to either certification or a manufacturer's declaration of conformity, with all other receive-only devices exempt from the technical requirements.

Prior to marketing in Canada, Class I transmitters, receivers and transceivers require certification. Class II devices are required to meet the appropriate technical requirements but are exempt from certification requirements.

Certification is a procedure where the manufacturer submits test data and technical information to a certification body and receives a certificate or grant of equipment authorization upon successful completion of the certification body's review of the submitted documents. Once the equipment authorization has been obtained, the label indicating compliance must be attached to all identical units, which are subsequently manufactured.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product which may result in increased emissions should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different line filter, different power supply, harnessing or I/O cable changes, etc.).

STATEMENT OF COMPLIANCE

The tested sample of Cisco-Linksys LLC model WRT600N complied with the requirements of the following regulations:

Industry Canada RSS-Gen Issue 1
RSS 210 Issue 6 "Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment"
FCC Part 15 Subpart C

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product which may result in increased emissions should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different line filter, different power supply, harnessing or I/O cable changes, etc.).

TEST RESULTS SUMMARY

DIGITAL TRANSMISSION SYSTEMS (2400 – 2483.5MHz)

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.247(a)	RSS 210 A8.2	Digital Modulation	Systems uses OFDM / DSSS techniques	-	Complies
15.247 (a) (2)	RSS 210 A8.2 (1)	6dB Bandwidth	802.11b = 10.2 MHz 802.11g = 16.6 MHz 802.11Siso = 36.8 MHz 802.11n 20MHz = 17.8 MHz 802.11n 40MHz = 36.7 MHz	>500kHz	Complies
	RSP100	99% Bandwidth	802.11b = 13.7 MHz 802.11g = 17.8 MHz 802.11Siso = 36.9 MHz 802.11n 20MHz = 18.4 MHz 802.11n 40MHz = 37.1 MHz	Information only	Complies
15.247 (b) (3)	RSS 210 A8.2 (4)	Output Power (multipoint systems)	21.5 dBm (.141 Watts) EIRP = 0.649 W Note 1	1Watt, EIRP limited to 4 Watts.	Complies
15.247(d)	RSS 210 A8.2 (2)	Power Spectral Density	6.5 dBm/3kHz	8dBm/3kHz	Complies
15.247(c)	RSS 210 A8.5	Antenna Port Spurious Emissions 30MHz – 25 GHz	Refer to plots	< -30dBc Note 2	Complies
15.247(c) / 15.209	RSS 210 A8.5	Radiated Spurious Emissions 30MHz – 25 GHz	50.7dBµV/m (342.8µV/m) @ 3453.3MHz (-3.3dB)	15.207 in restricted bands, all others <-30dBc Note 2	Complies

Note 1: EIRP calculated using antenna gain of 3.6 dBi for the highest EIRP multi-point system.

Note 2: Limit of -30dBc used because the power was measured using the UNII test procedure (maximum power averaged over a transmission burst) / RMS averaging over a time interval, as permitted under RSS 210 section A8.4(4).

GENERAL REQUIREMENTS APPLICABLE TO ALL BANDS

FCC Rule Part	RSS Rule part	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.203	-	RF Connector	Integral to the device. User will not have access or be able to open the device.		Complies
15.109	RSS GEN 7.2.3 Table 1	Receiver spurious emissions	49.4dBµV/m (295.1µV/m) @ 4924.0MHz		Complies (- 4.6 dB)
15.207	RSS GEN Table 2	AC Conducted Emissions	Refer to data	Refer to standard	Complies
15.247 (b) (5) 15.407 (f)	RSS 102	RF Exposure Requirements	Refer to MPE calculations in Exhibit 11, RSS 102 declaration and User Manual statements.	Refer to OET 65, FCC Part 1 and RSS 102	Complies
	RSP 100 RSS GEN 7.1.5	User Manual		Statement required regarding non-interference	
	RSP 100 RSS GEN 7.1.5	User Manual		Statement required regarding detachable antenna	

MEASUREMENT UNCERTAINTIES

ISO Guide 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level and were calculated in accordance with UKAS document LAB 34.

Measurement Type	Frequency Range (MHz)	Calculated Uncertainty (dB)
Conducted Emissions	0.15 to 30	± 2.4
Radiated Emissions	0.015 to 30	± 3.0
Radiated Emissions	30 to 1000	± 3.6
Radiated Emissions	1000 to 40000	± 6.0

EQUIPMENT UNDER TEST (EUT) DETAILS

GENERAL

The EUT is a Dual-band Wireless-N Router that is designed to provide wireless internet and networking services. Since the EUT would be placed on a tabletop during operation, the EUT was treated as tabletop equipment during testing to simulate the end-user environment. The electrical rating of the EUT is 120 Volts, 60 Hz, .5 Amps.

The sample was received on March 20, 2007 and tested on March 20, March 22, March 26, March 27 and March 28, 2007. The EUT consisted of the following component(s):

Manufacturer	Model	Description	Serial Number	FCC ID
Cisco-Linksys LLC	WRT600N	Dual-band Wireless-N Router	-	Q87-WRT600NV1

OTHER EUT DETAILS

List any items from the test log.

ANTENNA SYSTEM

The integral antenna system used with the Cisco-Linksys LLC model WRT600N consists of a diple antenna with a maximum gain of 3.6dBi, PiFA antenna maximum gain 2.5, and a PCB antenna maximum gain 1.9dBi.

ENCLOSURE

The EUT enclosure is primarily constructed of plastic. It measures approximately 30 cm wide by 5 cm deep by 25 cm high.

MODIFICATIONS

The EUT did not require modifications during testing in order to comply with emissions specifications.

SUPPORT EQUIPMENT

The following equipment was used as local support equipment for emissions testing:

Manufacturer	Model	Description	Serial Number	FCC ID
-	-	-	-	-

The following equipment was used as remote support equipment for emissions testing:

Manufacturer	Model	Description	Serial Number	FCC ID
Hewlett Packard	Zv6000	Laptop	CBD52904S1	DoC

EUT INTERFACE PORTS

The I/O cabling configuration during emissions testing was as follows:

Port	Connected To	Cable(s)		
		Description	Shielded or Unshielded	Length(m)
Ethernet	Laptop	Cat5	Unshielded	1.0
AC power	AC mains	-	-	-

EUT OPERATION

During emissions testing the EUT was set to either to transmit at maximum power or receive on appropriate channels.

TEST SITE

GENERAL INFORMATION

Final test measurements were taken on March 20, March 22, March 26, March 27 and March 28, 2007at the Elliott Laboratories Open Area Test Site # located at 684 West Maude Avenue, Sunnyvale, California or 41039 Boyce Road, Fremont, California Pursuant to section 2.948 of the FCC's Rules and section 3.3 of RSP-100, construction, calibration, and equipment data has been filed with the Commission.

ANSI C63.4:2003 recommends that ambient noise at the test site be at least 6 dB below the allowable limits. Ambient levels are below this requirement with the exception of predictable local TV, radio, and mobile communications traffic. The test site contains separate areas for radiated and conducted emissions testing. Considerable engineering effort has been expended to ensure that the facilities conform to all pertinent requirements of ANSI C63.4:2003 and RSS 212.

CONDUCTED EMISSIONS CONSIDERATIONS

Conducted emissions testing is performed in conformance with ANSI C63.4:2003 and RSS 212. Measurements are made with the EUT connected to the public power network through a nominal, standardized RF impedance, which is provided by a line impedance stabilization network, known as a LISN. A LISN is inserted in series with each current-carrying conductor in the EUT power cord.

RADIATED EMISSIONS CONSIDERATIONS

The FCC has determined that radiation measurements made in a shielded enclosure are not suitable for determining levels of radiated emissions. Radiated measurements are performed in an open field environment or in a semi-anechoic chamber. The test sites are maintained free of conductive objects within the CISPR defined elliptical area incorporated in ANSI C63.4:2003 guidelines and meet the Normalized Site Attenuation (NSA) requirements of ANSI C63.4:2003 / RSS 212.

MEASUREMENT INSTRUMENTATION

RECEIVER SYSTEM

An EMI receiver as specified in CISPR 16-1 is used for emissions measurements. The receivers used can measure over the frequency range of 9 kHz up to 2000 MHz. These receivers allow both ease of measurement and high accuracy to be achieved. The receivers have Peak, Average, and CISPR (Quasi-peak) detectors built into their design so no external adapters are necessary. The receiver automatically sets the required bandwidth for the CISPR detector used during measurements. If the repetition frequency of the signal being measured is below 20Hz, peak measurements are made in lieu of Quasi-Peak measurements.

For measurements above the frequency range of the receivers, a spectrum analyzer is utilized because it provides visibility of the entire spectrum along with the precision and versatility required to support engineering analysis. Average measurements above 1000MHz are performed on the spectrum analyzer using the linear-average method with a resolution bandwidth of 1 MHz and a video bandwidth of 10 Hz, unless the signal is pulsed in which case the average (or video) bandwidth of the measuring instrument is reduced to onset of pulse desensitization and then increased.

INSTRUMENT CONTROL COMPUTER

The receivers utilize either a Rohde & Schwarz EZM Spectrum Monitor/Controller or contain an internal Spectrum Monitor/Controller to view and convert the receiver measurements to the field strength at an antenna or voltage developed at the LISN measurement port, which is then compared directly with the appropriate specification limit. This provides faster, more accurate readings by performing the conversions described under Sample Calculations within the Test Procedures section of this report. Results are printed in a graphic and/or tabular format, as appropriate. A personal computer is used to record all measurements made with the receivers.

The Spectrum Monitor provides a visual display of the signal being measured. In addition, the controller or a personal computer run automated data collection programs which control the receivers. This provides added accuracy since all site correction factors, such as cable loss and antenna factors are added automatically.

LINE IMPEDANCE STABILIZATION NETWORK (LISN)

Line conducted measurements utilize a fifty microhenry Line Impedance Stabilization Network as the monitoring point. The LISN used also contains a 250 uH CISPR adapter. This network provides for calibrated radio frequency noise measurements by the design of the internal low pass and high pass filters on the EUT and measurement ports, respectively.

FILTERS/ATTENUATORS

External filters and precision attenuators are often connected between the receiving antenna or LISN and the receiver. This eliminates saturation effects and non-linear operation due to high amplitude transient events.

ANTENNAS

A loop antenna is used below 30 MHz. For the measurement range 30 MHz to 1000 MHz either a combination of a biconical antenna and a log periodic or a bi-log antenna is used. Above 1000 MHz, horn antennas are used. The antenna calibration factors to convert the received voltage to an electric field strength are included with appropriate cable loss and amplifier gain factors to determine an overall site factor, which is then programmed into the test receivers or incorporated into the test software.

ANTENNA MAST AND EQUIPMENT TURNTABLE

The antennas used to measure the radiated electric field strength are mounted on a non-conductive antenna mast equipped with a motor-drive to vary the antenna height. Measurements below 30 MHz are made with the loop antenna at a fixed height of 1m above the ground plane.

ANSI C63.4:2003 and RSS 212 specify that the test height above ground for table mounted devices shall be 80 centimeters. Floor mounted equipment shall be placed on the ground plane if the device is normally used on a conductive floor or separated from the ground plane by insulating material from 3 to 12 mm if the device is normally used on a non-conductive floor. During radiated measurements, the EUT is positioned on a motorized turntable in conformance with this requirement.

INSTRUMENT CALIBRATION

All test equipment is regularly checked to ensure that performance is maintained in accordance with the manufacturer's specifications. All antennas are calibrated at regular intervals with respect to tuned half-wave dipoles. An exhibit of this report contains the list of test equipment used and calibration information.

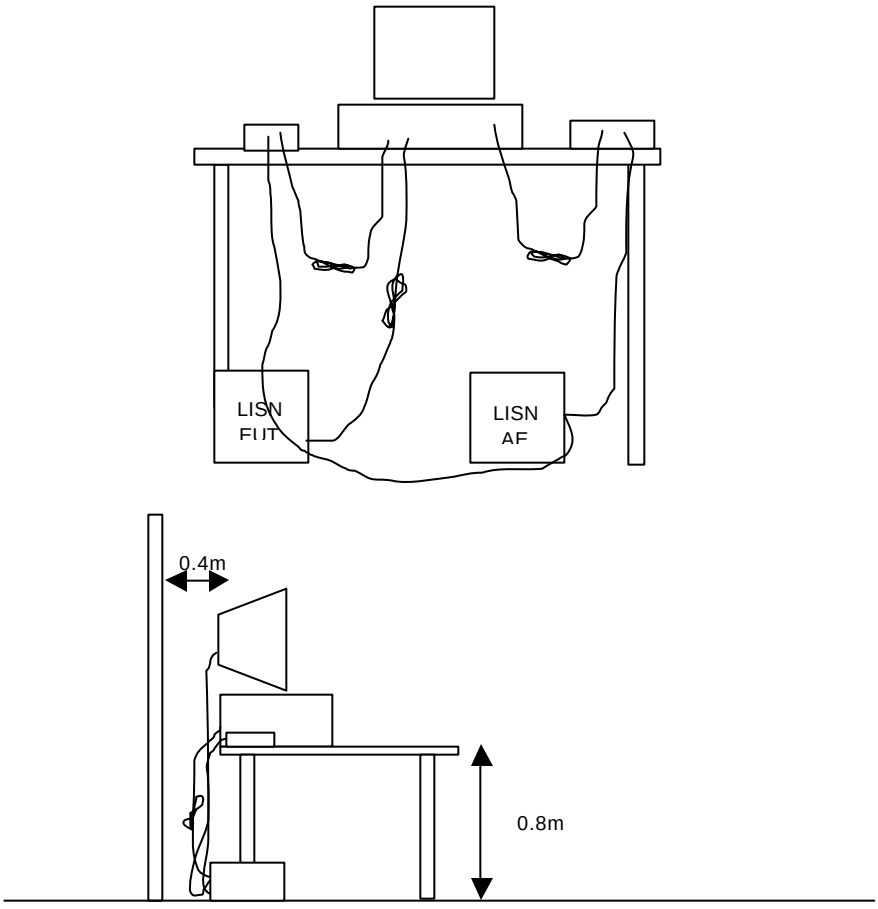
TEST PROCEDURES

EUT AND CABLE PLACEMENT

The regulations require that interconnecting cables be connected to the available ports of the unit and that the placement of the unit and the attached cables simulate the worst case orientation that can be expected from a typical installation, so far as practicable. To this end, the position of the unit and associated cabling is varied within the guidelines of ANSI C63.4:2003, and the worst-case orientation is used for final measurements.

CONDUCTED EMISSIONS

Conducted emissions are measured at the plug end of the power cord supplied with the EUT. Excess power cord length is wrapped in a bundle between 30 and 40 centimeters in length near the center of the cord. Preliminary measurements are made to determine the highest amplitude emission relative to the specification limit for all the modes of operation. Placement of system components and varying of cable positions are performed in each mode. A final peak mode scan is then performed in the position and mode for which the highest emission was noted on all current carrying conductors of the power cord.



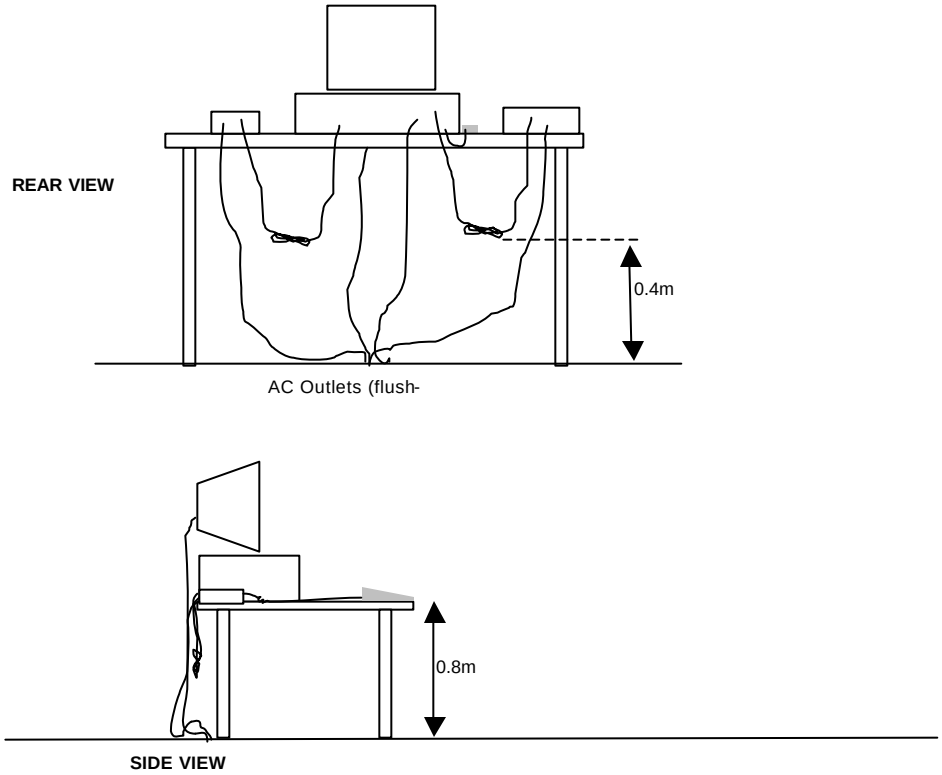
RADIATED EMISSIONS

A preliminary scan of the radiated emissions is performed in which all significant EUT frequencies are identified with the system in a nominal configuration. At least two scans are performed, one scan for each antenna polarization (horizontal and vertical; loop parallel and perpendicular to the EUT). During the preliminary scans, the EUT is rotated through 360°, the antenna height is varied (for measurements above 30 MHz) and cable positions are varied to determine the highest emission relative to the limit. Preliminary scans may be performed in a fully anechoic chamber for the purposes of identifying the frequencies of the highest emissions from the EUT.

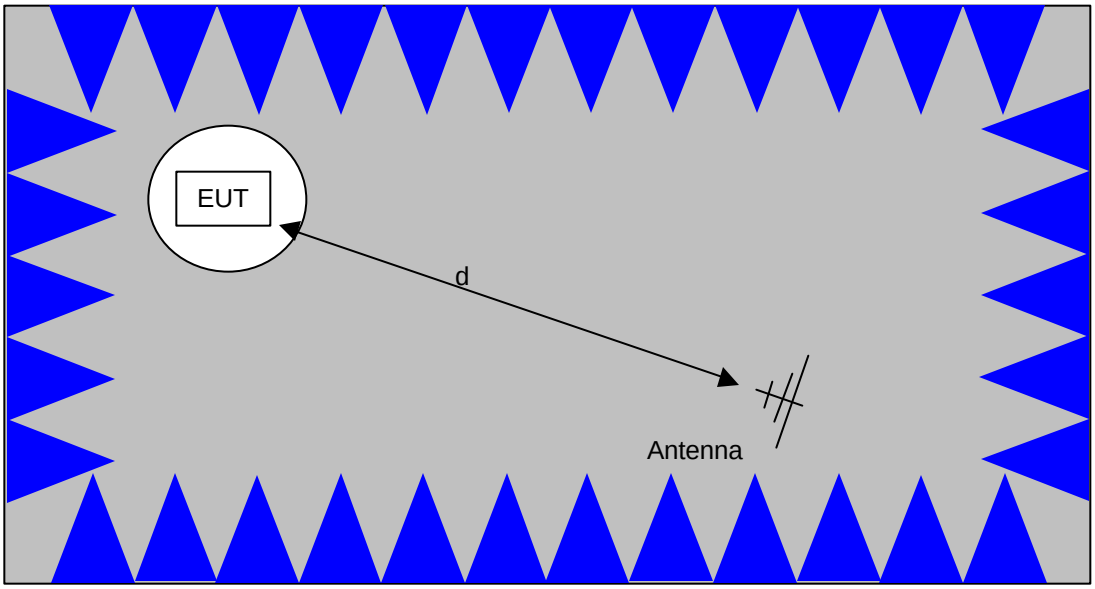
A speaker is provided in the receiver to aid in discriminating between EUT and ambient emissions. Other methods used during the preliminary scan for EUT emissions involve scanning with near field magnetic loops, monitoring I/O cables with RF current clamps, and cycling power to the EUT.

Final maximization is a phase in which the highest amplitude emissions identified in the spectral search are viewed while the EUT azimuth angle is varied from 0 to 360 degrees relative to the receiving antenna. The azimuth, which results in the highest emission is then maintained while varying the antenna height from one to four meters (for measurements above 30 MHz, measurements below 30 MHz are made with the loop antenna at a fixed height of 1m). The result is the identification of the highest amplitude for each of the highest peaks. Each recorded level is corrected in the receiver using appropriate factors for cables, connectors, antennas, and preamplifier gain.

When testing above 18 GHz, the receive antenna is located at 1meter from the EUT and the antenna height is restricted to a maximum of 2.5 meters.

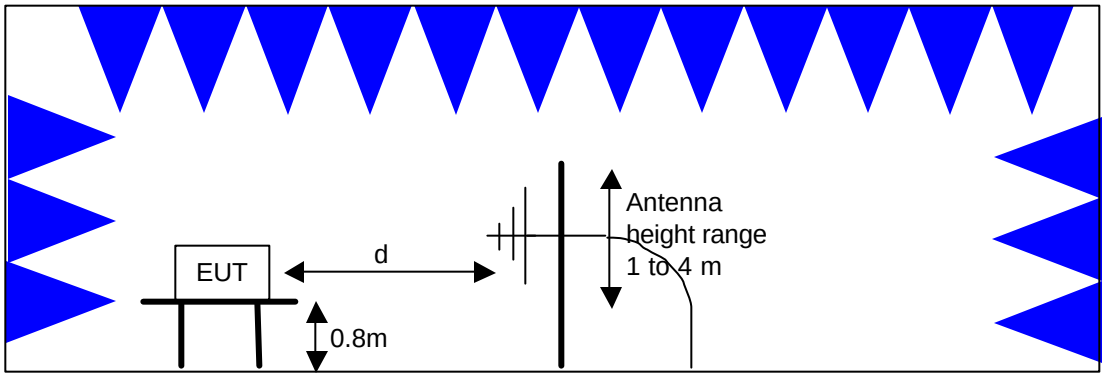


Typical Test Configuration for Radiated Field Strength Measurements



The anechoic materials on the walls and ceiling ensure compliance with the normalized site attenuation requirements of CISPR 16 / CISPR 22 / ANSI C63.4 for an alternate test site at the measurement distances used.

Floor-standing equipment is placed on the floor with insulating supports between the unit and the ground plane.



Test Configuration for Radiated Field Strength Measurements
Semi-Anechoic Chamber, Plan and Side Views

BANDWIDTH MEASUREMENTS

The 6dB, 20dB and/or 26dB signal bandwidth is measured in using the bandwidths recommended by ANSI C63.4. When required, the 99% bandwidth is measured using the methods detailed in RSS GEN.

SPECIFICATION LIMITS AND SAMPLE CALCULATIONS

The limits for conducted emissions are given in units of microvolts, and the limits for radiated emissions are given in units of microvolts per meter at a specified test distance. Data is measured in the logarithmic form of decibels relative to one microvolt, or dB microvolts (dBuV). For radiated emissions, the measured data is converted to the field strength at the antenna in dB microvolts per meter (dBuV/m). The results are then converted to the linear forms of uV and uV/m for comparison to published specifications.

For reference, converting the specification limits from linear to decibel form is accomplished by taking the base ten logarithm, then multiplying by 20. These limits in both linear and logarithmic form are as follows:

GENERAL TRANSMITTER RADIATED EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from transmitters that fall in restricted bands[1] (with the exception of transmitters operating under FCC Part 15 Subpart D and RSS 210 Annex 9), the limits for all emissions from a low power device operating under the general rules of RSS 310 (tables 3 and 4), RSS 210 (table 2) and FCC Part 15 Subpart C section 15.209.

Frequency Range (MHz)	Limit (uV/m)	Limit (dBuV/m @ 3m)
0.009-0.490	$2400/F_{KHz}$ @ 300m	$67.6-20*\log_{10}(F_{KHz})$ @ 300m
0.490-1.705	$24000/F_{KHz}$ @ 30m	$87.6-20*\log_{10}(F_{KHz})$ @ 30m
1.705 to 30	30 @ 30m	29.5 @ 30m
30 to 88	100 @ 3m	40 @ 3m
88 to 216	150 @ 3m	43.5 @ 3m
216 to 960	200 @ 3m	46.0 @ 3m
Above 960	500 @ 3m	54.0 @ 3m

RECEIVER RADIATED SPURIOUS EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from receivers as detailed in FCC Part 15.109, RSS 210 Table 2, RSS GEN Table 1 and RSS 310 Table 3. Note that receivers operating outside of the frequency range 30 MHz – 960 MHz are exempt from the requirements of 15.109.

Frequency Range (MHz)	Limit (uV/m @ 3m)	Limit (dBuV/m @ 3m)
30 to 88	100	40
88 to 216	150	43.5
216 to 960	200	46.0
Above 960	500	54.0

[1] The restricted bands are detailed in FCC 15.203, RSS 210 Table 1 and RSS 310 Table 2

OUTPUT POWER LIMITS – DIGITAL TRANSMISSION SYSTEMS

The table below shows the limits for output power and output power density. Where the signal bandwidth is less than 20 MHz the maximum output power is reduced to the power spectral density limit plus 10 times the log of the bandwidth (in MHz).

Operating Frequency (MHz)	Output Power	Power Spectral Density
902 – 928	1 Watt (30 dBm)	8 dBm/3kHz
2400 – 2483.5	1 Watt (30 dBm)	8 dBm/3kHz
5725 – 5850	1 Watt (30 dBm)	8 dBm/3kHz

The maximum permitted output power is reduced by 1dB for every dB the antenna gain exceeds 6dBi. Fixed point-to-point applications using the 5725 – 5850 MHz band are not subject to this restriction.

TRANSMIT MODE SPURIOUS RADIATED EMISSIONS LIMITS – FHSS and DTS SYSTEMS

The limits for unwanted (spurious) emissions from the transmitter falling in the restricted bands are those specified in the general limits sections of FCC Part 15 and RSS 210. All other unwanted (spurious) emissions shall be at least 20dB below the level of the highest in-band signal level (30dB if the power is measured using the sample detector/power averaging method).

SAMPLE CALCULATIONS - CONDUCTED EMISSIONS

Receiver readings are compared directly to the conducted emissions specification limit (decibel form) as follows:

$$R_r - S = M$$

where:

R_r = Receiver Reading in dBuV

S = Specification Limit in dBuV

M = Margin to Specification in +/- dB

SAMPLE CALCULATIONS - RADIATED EMISSIONS

Receiver readings are compared directly to the specification limit (decibel form). The receiver internally corrects for cable loss, preamplifier gain, and antenna factor. The calculations are in the reverse direction of the actual signal flow, thus cable loss is added and the amplifier gain is subtracted. The Antenna Factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

A distance factor, when used for electric field measurements above 30MHz, is calculated by using the following formula:

$$F_d = 20*LOG_{10} (D_m/D_s)$$

where:

F_d = Distance Factor in dB

D_m = Measurement Distance in meters

D_s = Specification Distance in meters

For electric field measurements below 30MHz the extrapolation factor is either determined by making measurements at multiple distances or a theoretical value is calculated using the formula:

$$F_d = 40*LOG_{10} (D_m/D_s)$$

Measurement Distance is the distance at which the measurements were taken and Specification Distance is the distance at which the specification limits are based. The antenna factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

The margin of a given emission peak relative to the limit is calculated as follows:

$$R_C = R_r + F_d$$

and

$$M = R_C - L_S$$

where:

R_r = Receiver Reading in dBuV/m

F_d = Distance Factor in dB

R_C = Corrected Reading in dBuV/m

L_S = Specification Limit in dBuV/m

M = Margin in dB Relative to Spec

SAMPLE CALCULATIONS - FIELD STRENGTH TO EIRP CONVERSION

Where the radiated electric field strength is expressed in terms of the equivalent isotropic radiated power (eirp), or where a field strength measurement of output power is made in lieu of a direct measurement, the following formula is used to convert between eirp and field strength at a distance of 3m from the equipment under test:

$$E = \frac{1000000 \text{ v } 30\ P}{3} \text{ microvolts per meter}$$

where P is the eirp (Watts)

EXHIBIT 1: Test Equipment Calibration Data

1 Page

Radio Antenna Port (Power and Spurious Emissions), 23-Mar-07
Engineer: Mark Hill

Manufacturer	Description	Model #	Asset #	Cal Due
EMCO	Antenna, Horn, 1-18 GHz	3115	786	28-Nov-07
Hewlett Packard	SpecAn 9 kHz - 40 GHz, FMT (SA40) Blue	8564E (84125C)	1393	09-Jan-08
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB7	1538	08-Aug-07

Radio Antenna Port (Power and Spurious Emissions), 20-Mar to 28-Mar-07
Engineer: Juan Martinez, Rafael Varelas

Manufacturer	Description	Model #	Asset #	Cal Due
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	263	16-Mar-08
EMCO	Antenna, Horn, 1-18 GHz	3115	786	28-Nov-07
Hewlett Packard	SpecAn 9 kHz - 40 GHz, FMT (SA40) Blue	8564E (84125C)	1393	09-Jan-08

EXHIBIT 2: Test Measurement Data

162 Pages

Elliott

EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	Test-Log Number:	T67324
		Project Manager:	-
Contact:	Kevin Lee		
Emissions Spec:	FCC 15.247	Class:	Radio
Immunity Spec:	-	Environment:	-

EMC Test Data

For The

Cisco-Linksys

Model

WRT600N

Date of Last Test: 4/3/2007

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	Test-Log Number:	T67324
		Project Manager:	-
Contact:	Kevin Lee		
Emissions Spec:	FCC 15.247	Class:	Radio
Immunity Spec:	-	Environment:	-

EUT INFORMATION

The following information was collected during the test sessions(s).

General Description

The EUT is a Dual-band Wireless-N Router that is designed to provide wireless internet and networking services. Since the EUT would be placed on a table top during operation, the EUT was treated as table-top equipment during testing to simulate the end-user environment. The electrical rating of the EUT is 120 Volts , 60 Hz, .5 Amps.

Equipment Under Test

Manufacturer	Model	Description	Serial Number	FCC ID
Cisco-Linksys LLC	WRT600N	Dual-band Wireless-N	-	Q87-WRT600NV1

Other EUT Details

None

EUT Antenna (Intentional Radiators Only)

The antenna is integral to the device. A diple antenna with a maximum gain of 3.6dBi, PiFA antenna maximum gain 2.5, and a PCB antenna maximum gain 1.9dBi.

EUT Enclosure

The EUT enclosure is primarily constructed of plastic. It measures approximately 30 cm wide by 5 cm deep by 25 cm high.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	Test-Log Number:	T67324
		Project Manager:	-
Contact:	Kevin Lee		
Emissions Spec:	FCC 15.247	Class:	Radio
Immunity Spec:	-	Environment:	-

Modification History

Mod. #	Test	Date	Modification
1			
2			
3			

Modifications applied are assumed to be used on subsequent tests unless otherwise stated as a further modification.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Project Manager:	-
Contact:	Kevin Lee		
Emissions Spec:	FCC 15.247	Class:	Radio
Immunity Spec:	-	Environment:	-

Test Configuration #1

The following information was collected during the test sessions(s).

Local Support Equipment

Manufacturer	Model	Description	Serial Number	FCC ID
-	-	-	-	-

Remote Support Equipment

Manufacturer	Model	Description	Serial Number	FCC ID
Hewlett Packard	zv6000	Laptop	CND52904S1	DoC

Cabling and Ports

Port	Connected To	Cable(s)		
		Description	Shielded or Unshielded	Length(m)
Ethernet	Laptop	Cat5	Unshielded	1.0
AC Power	AC Mains	-	-	-

EUT Operation During Emissions Tests

During emissions testing the EUT was set to either to transmit at maximum power or receive on appropriate channels.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

RSS 210 and FCC 15.247 Bandedges

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 3/20/2007
Test Engineer: Jmartinez
Test Location: Fremont Chamber #3

Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 18 °C
Rel. Humidity: 37 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1 (802.11b Mode)	Bandedges	FCC Part 15.209 / 15.247(c)	Pass	Refer to runs
2 (802.11g Mode)	Bandedges	FCC Part 15.209 / 15.247(c)	Pass	Refer to runs
3 (802.11Siso Mode)	Bandedges	FCC Part 15.209 / 15.247(c)	Pass	Refer to runs
4 (802.11n 40 MHz Mode)	Bandedges	FCC Part 15.209 / 15.247(c)	Pass	Refer to runs
5 (802.11n 20 MHz Mode)	Bandedges	FCC Part 15.209 / 15.247(c)	Pass	Refer to runs

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

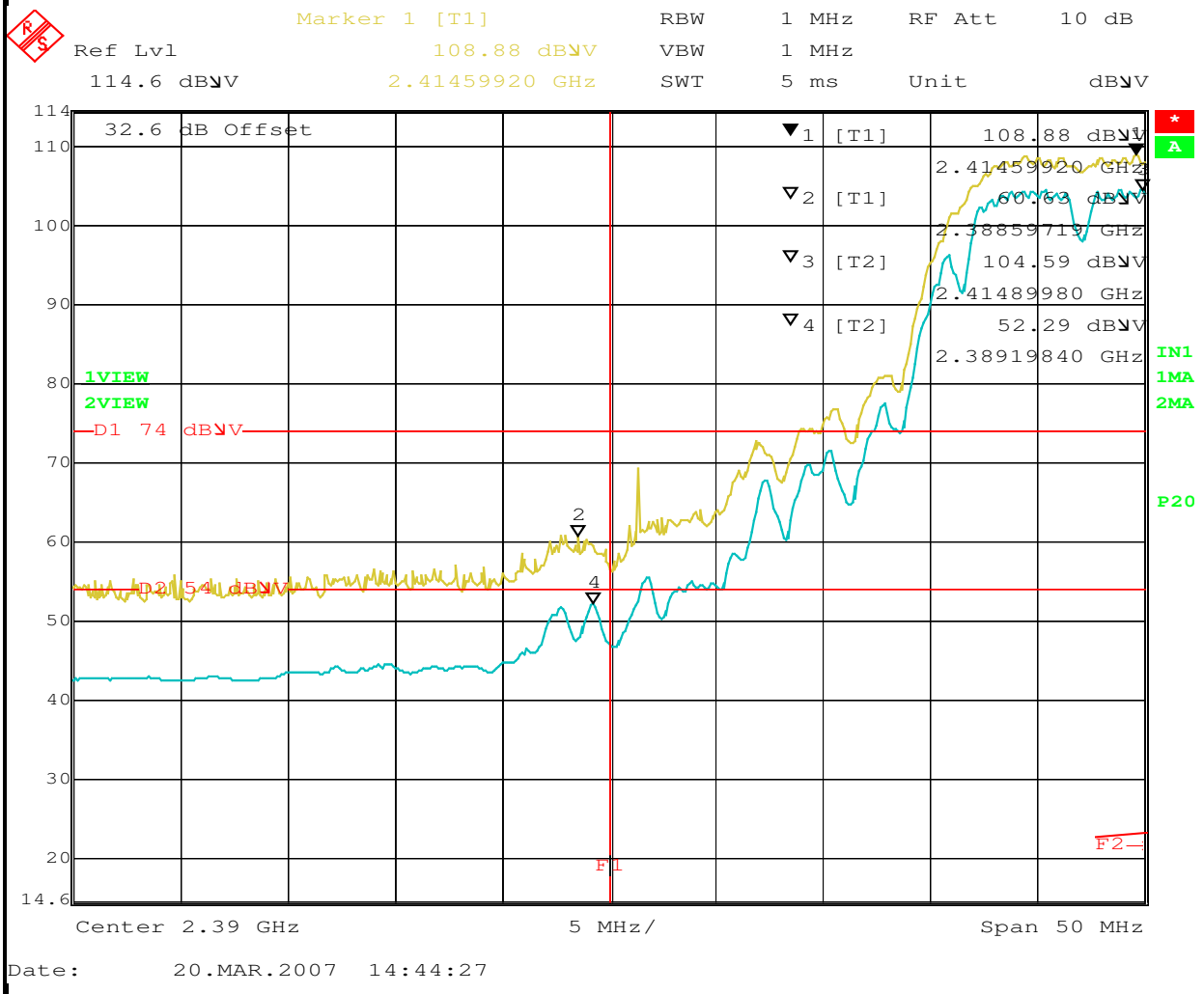
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1a: Bandedge, 802.11b

Bandedge Power Measurements: Unit was vertical

Power Setting[2]	Frequency (MHz)	Output Power (dBm)[1]	Output Power mW	Antenna Gain (dBi)	Result	EIRP[Note 2] dBm	EIRP[Note 2] W	Output Power (dBm)[3]	Output Power mW
0x40xx	2412	20.0	100.0	3.6	Pass	23.6	0.229		

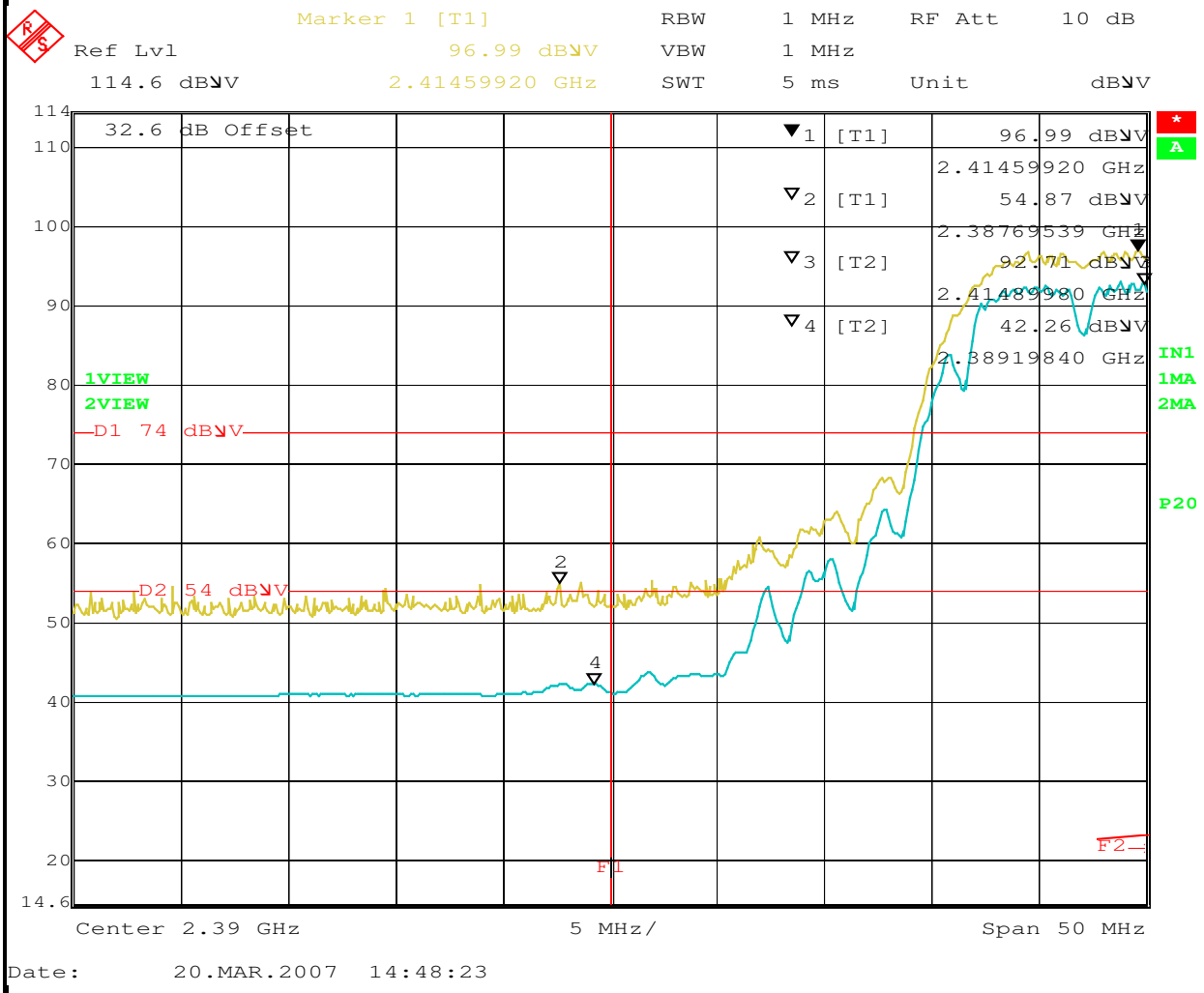
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



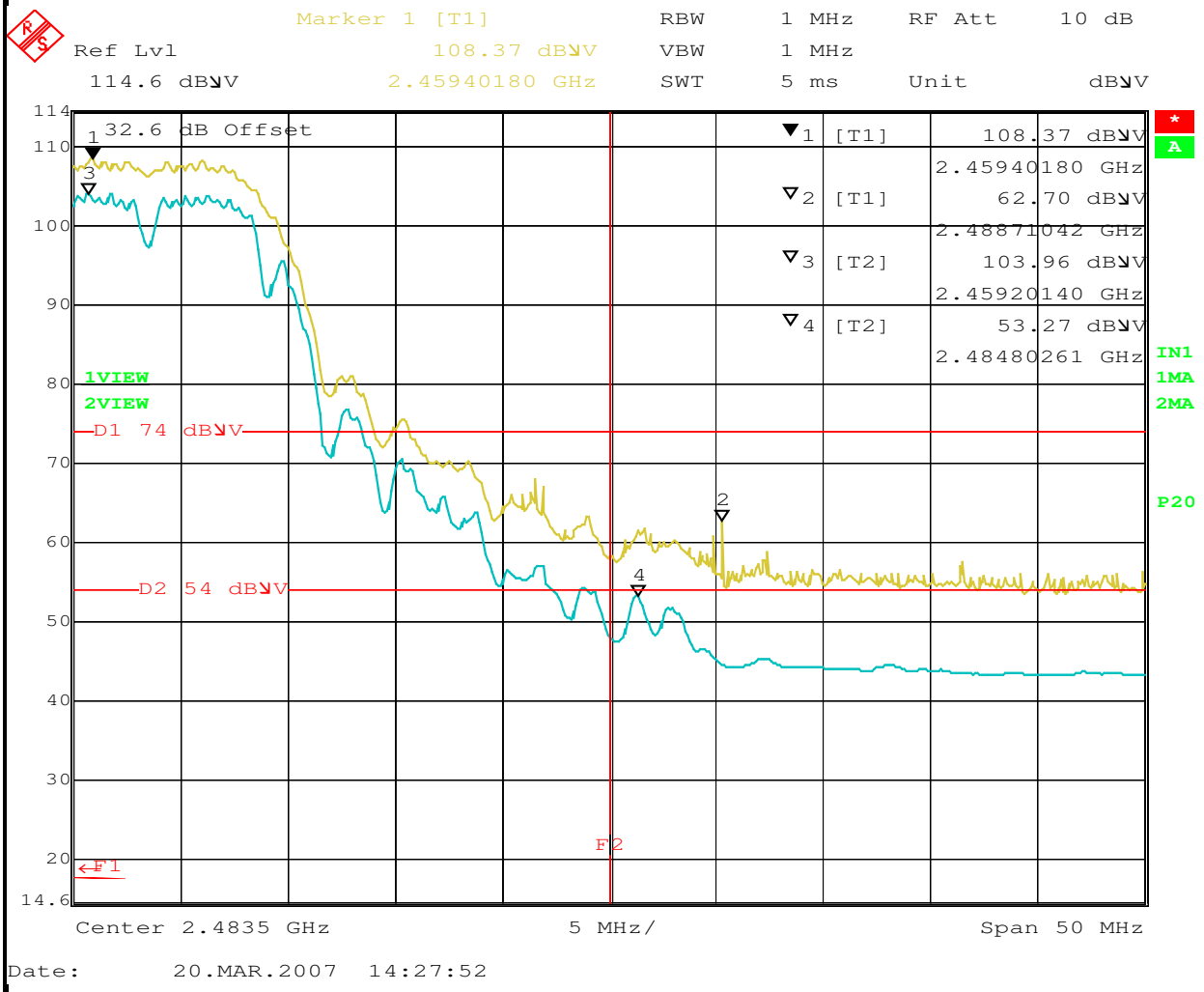
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1b: Bandedge, 802.11b

Bandedge Power Measurements: Unit was vertical

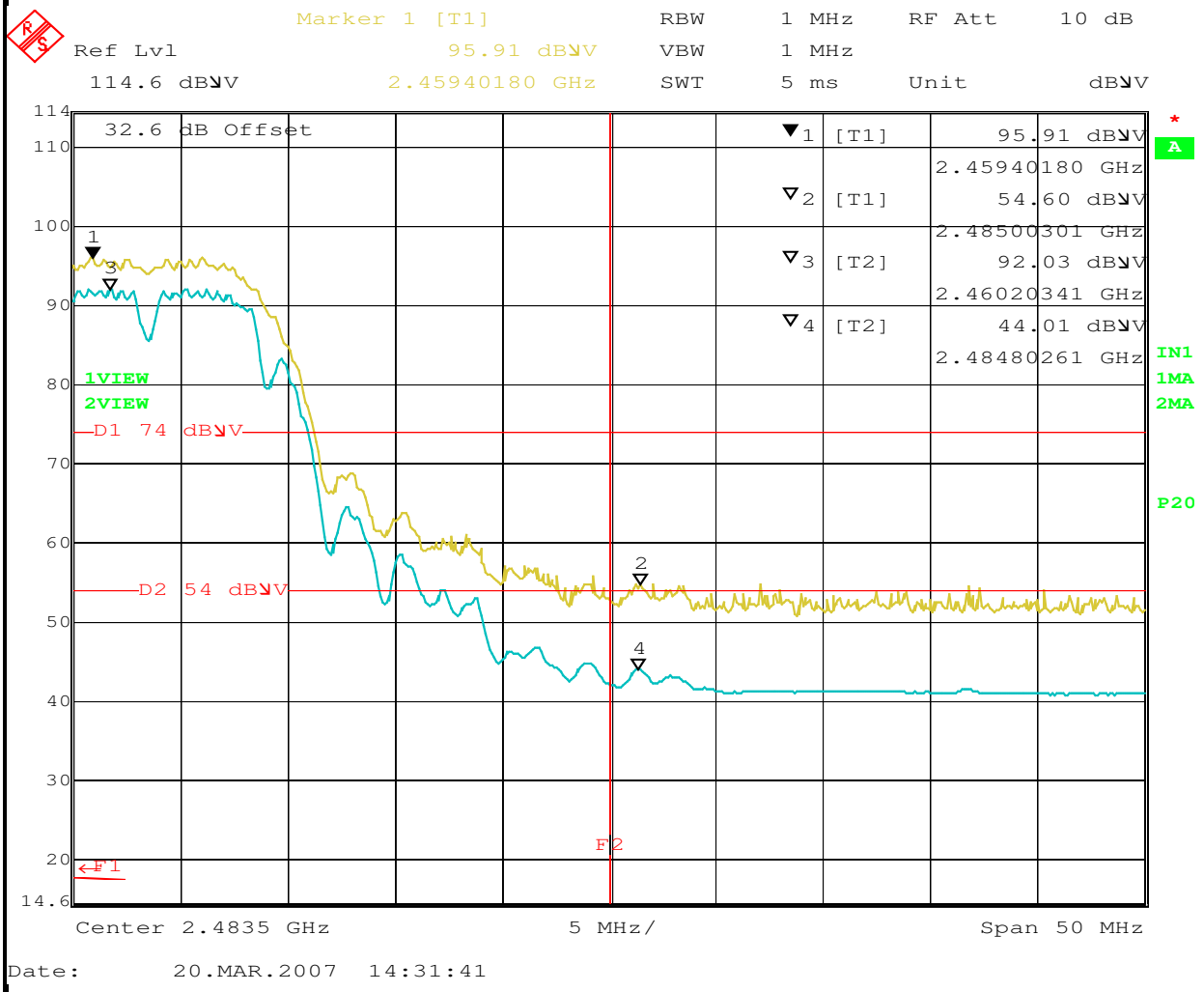
Power Setting[2]	Frequency (MHz)	Output Power (dBm)[1]	Output Power mW	Antenna Gain (dBi)	Result	EIRP[Note 2] dBm	EIRP W	Output Power (dBm)[3]	Output Power mW
0x47xx	2462	20.0	100.0	3.6	Pass	23.6	0.229		

Vertical



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



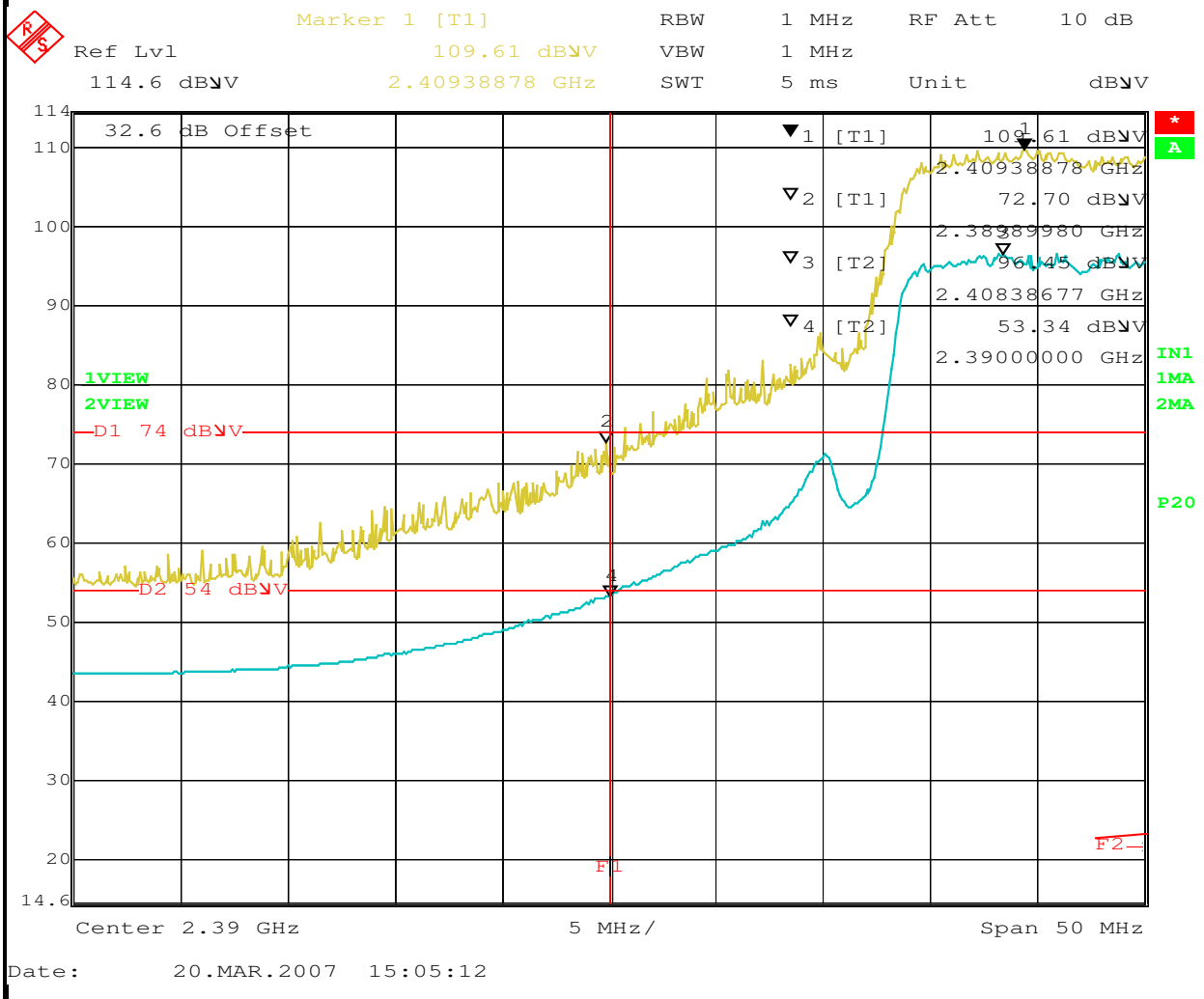
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #2a: Bandedge, 802.11g

Bandedge Power Measurements: Unit was vertical

Power Setting[2]	Frequency (MHz)	Output Power (dBm)[1]	Output Power mW	Antenna Gain (dBi)	Result	EIRP[Note 2] dBm	EIRP W	Output Power (dBm)[3]	Output Power mW
0x3Axx	2412	17.5	56.2	3.6	Pass	21.1	0.129		

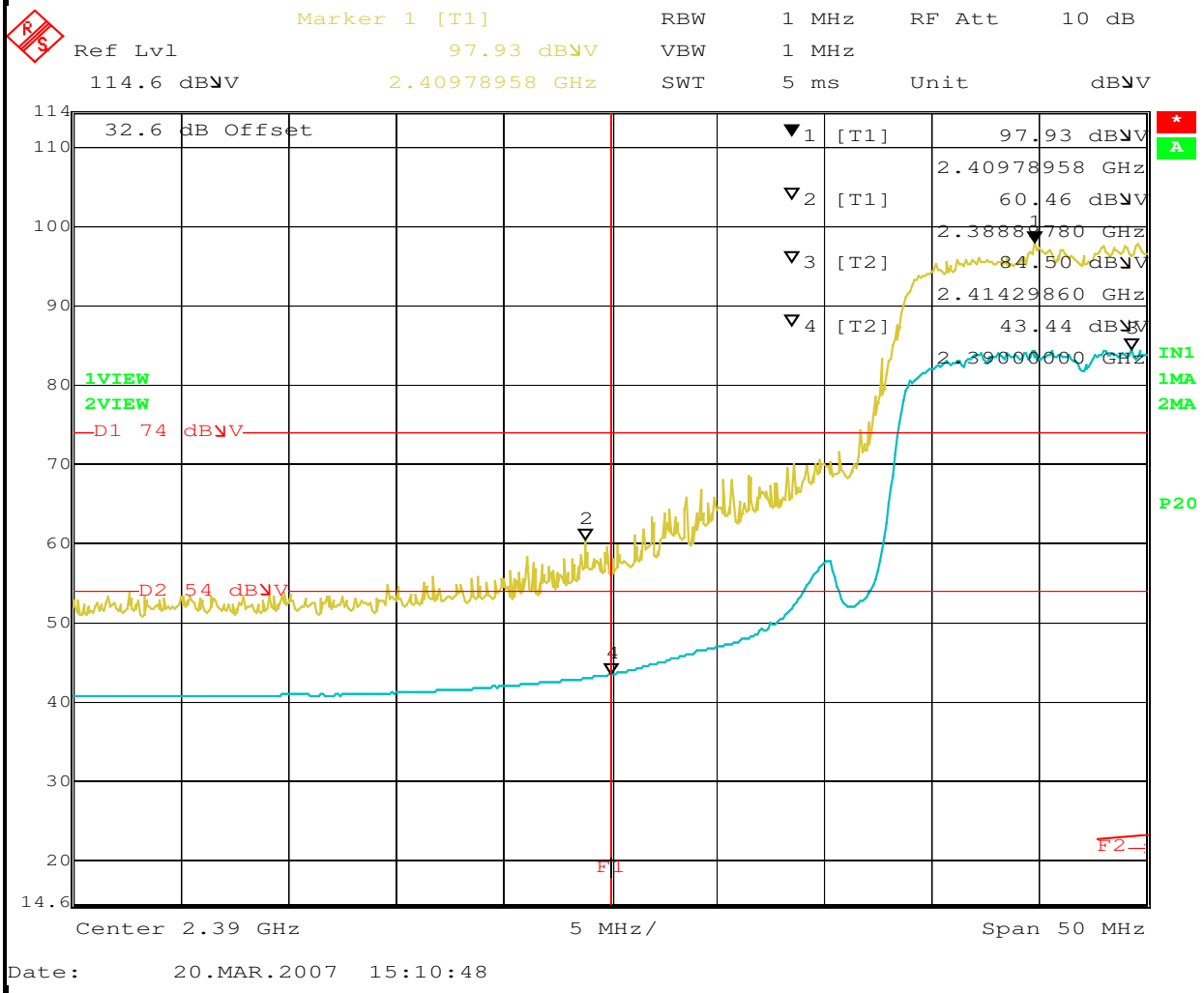
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



Elliott — EMC Test Data

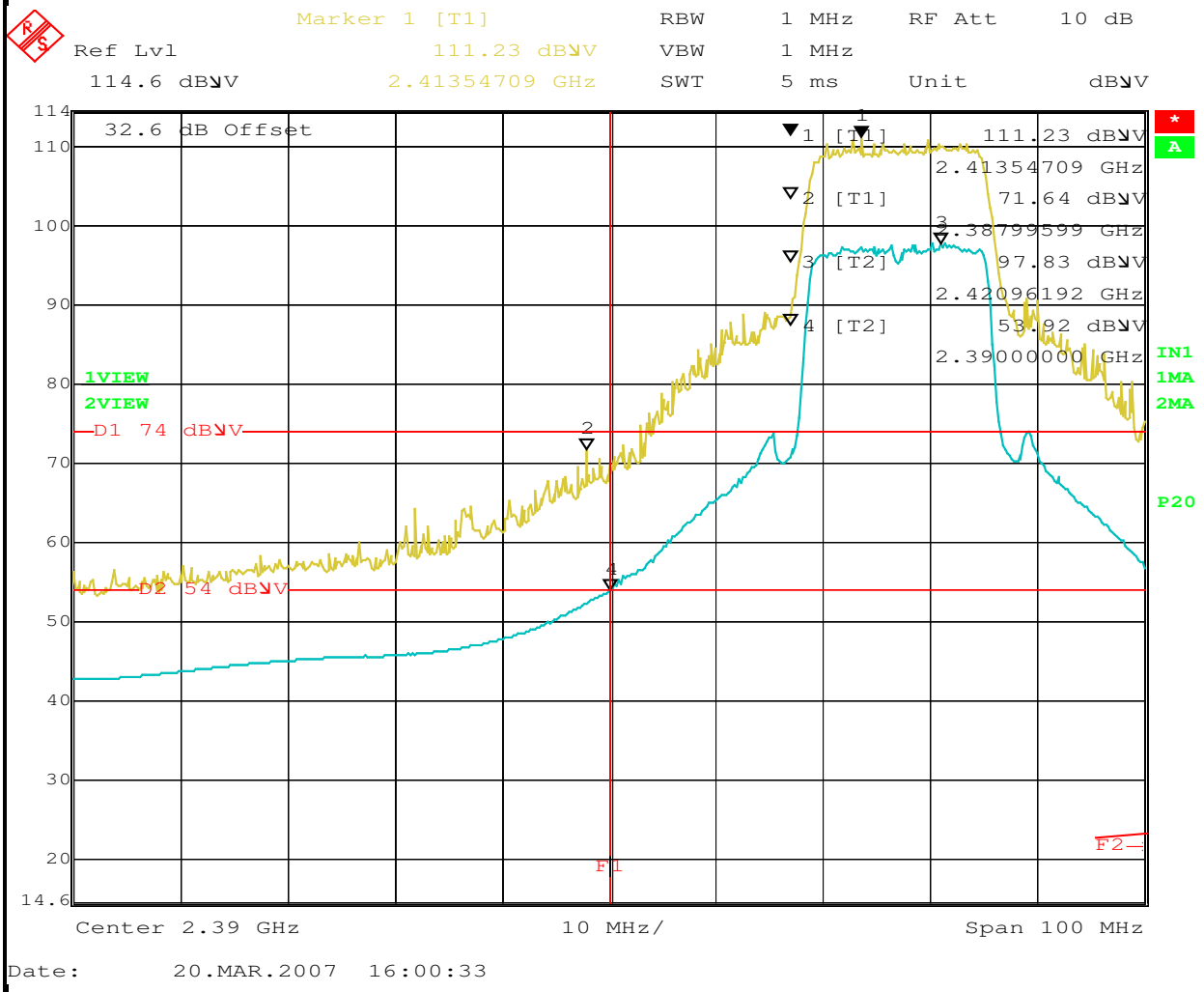
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #2b: Bandedge, 802.11g

Bandedge Power Measurements: Unit was vertical

Power Setting[2]	Frequency (MHz)	Output Power (dBm)[1]	Output Power mW	Antenna Gain (dBi)	Result	EIRP[Note 2] dBm	EIRP W	Output Power (dBm)[3]	Output Power mW
0x33xx	2417	19.5	89.1	3.6	Pass	23.1	0.204		

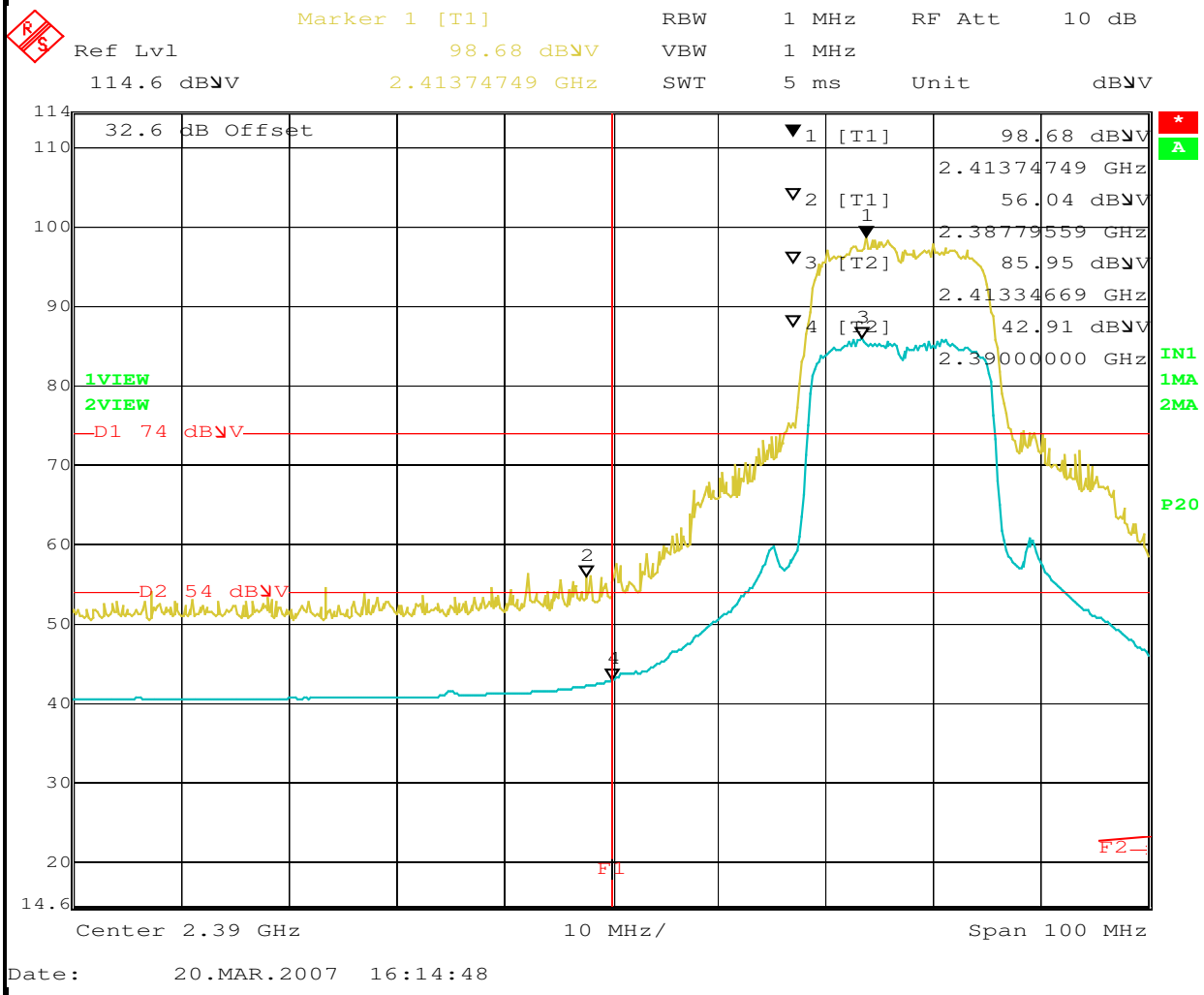
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



Elliott — EMC Test Data

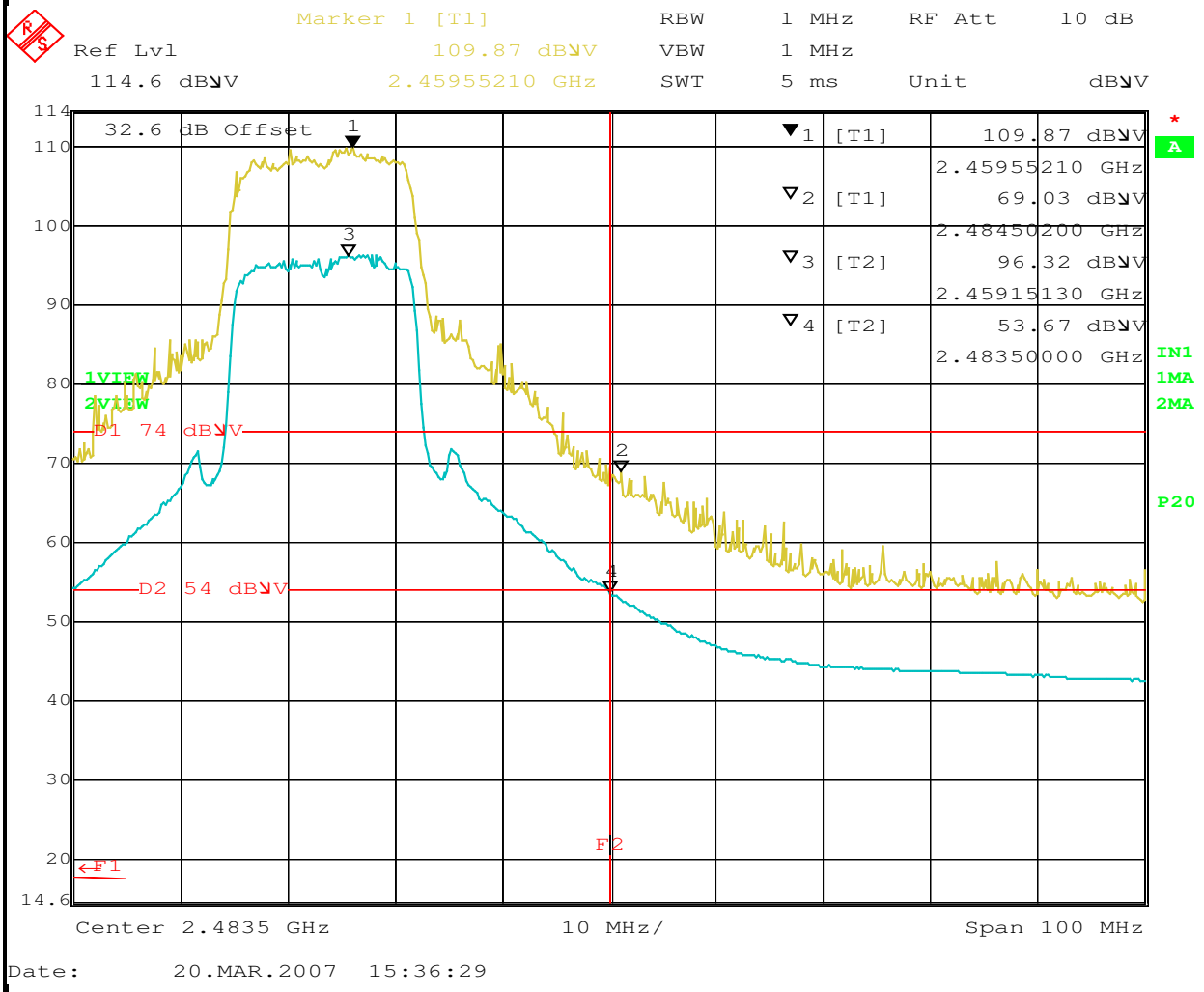
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #2c: Bandedge, 802.11g

Bandedge Power Measurements: Unit was vertical

Power Setting[2]	Frequency (MHz)	Output Power (dBm)[1]	Output Power mW	Antenna Gain (dBi)	Result	EIRP[Note 2] dBm	EIRP W	Output Power (dBm)[3]	Output Power mW
0x3Bxx	2457	19.0	79.4	3.6	Pass	22.6	0.182		

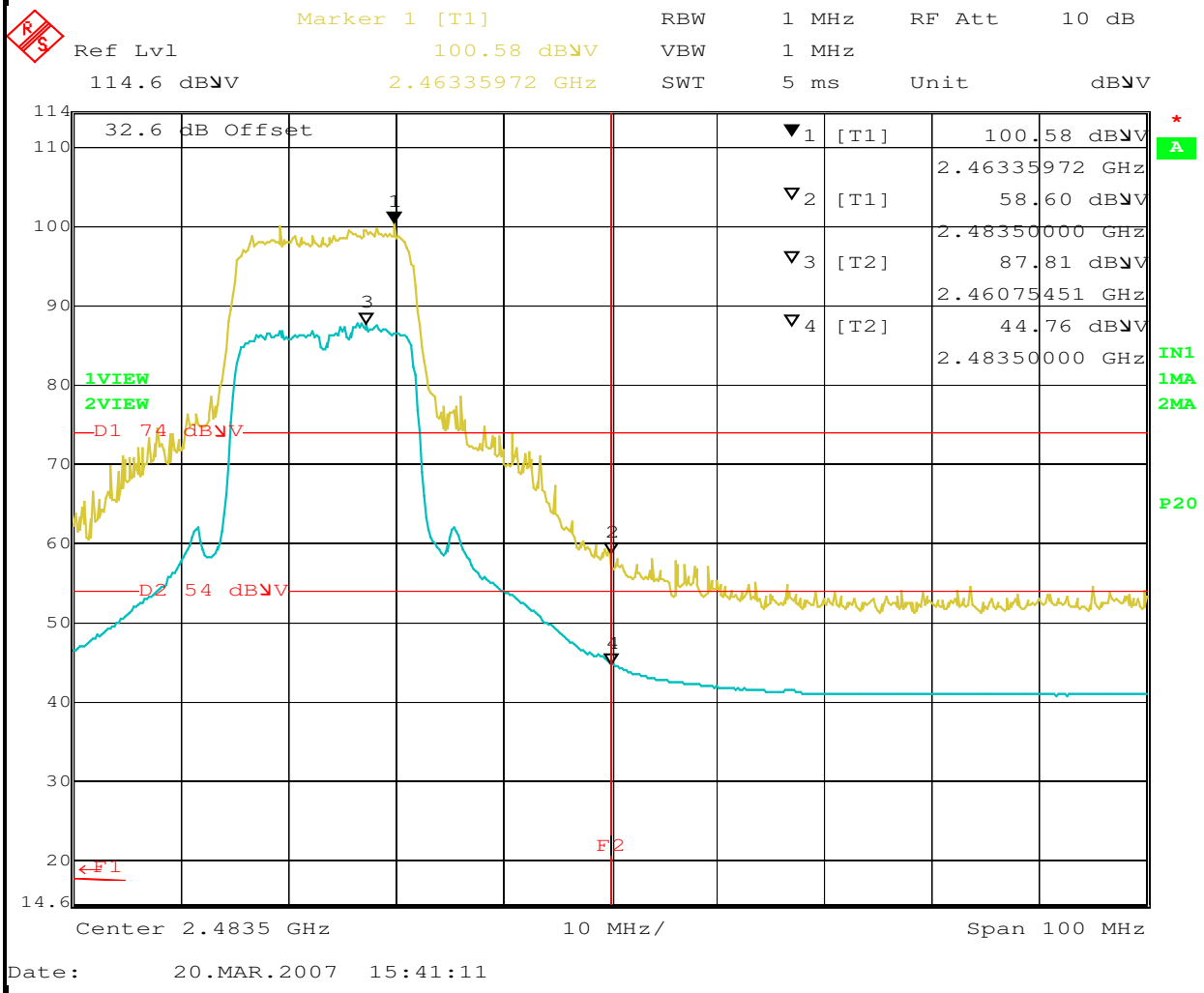
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



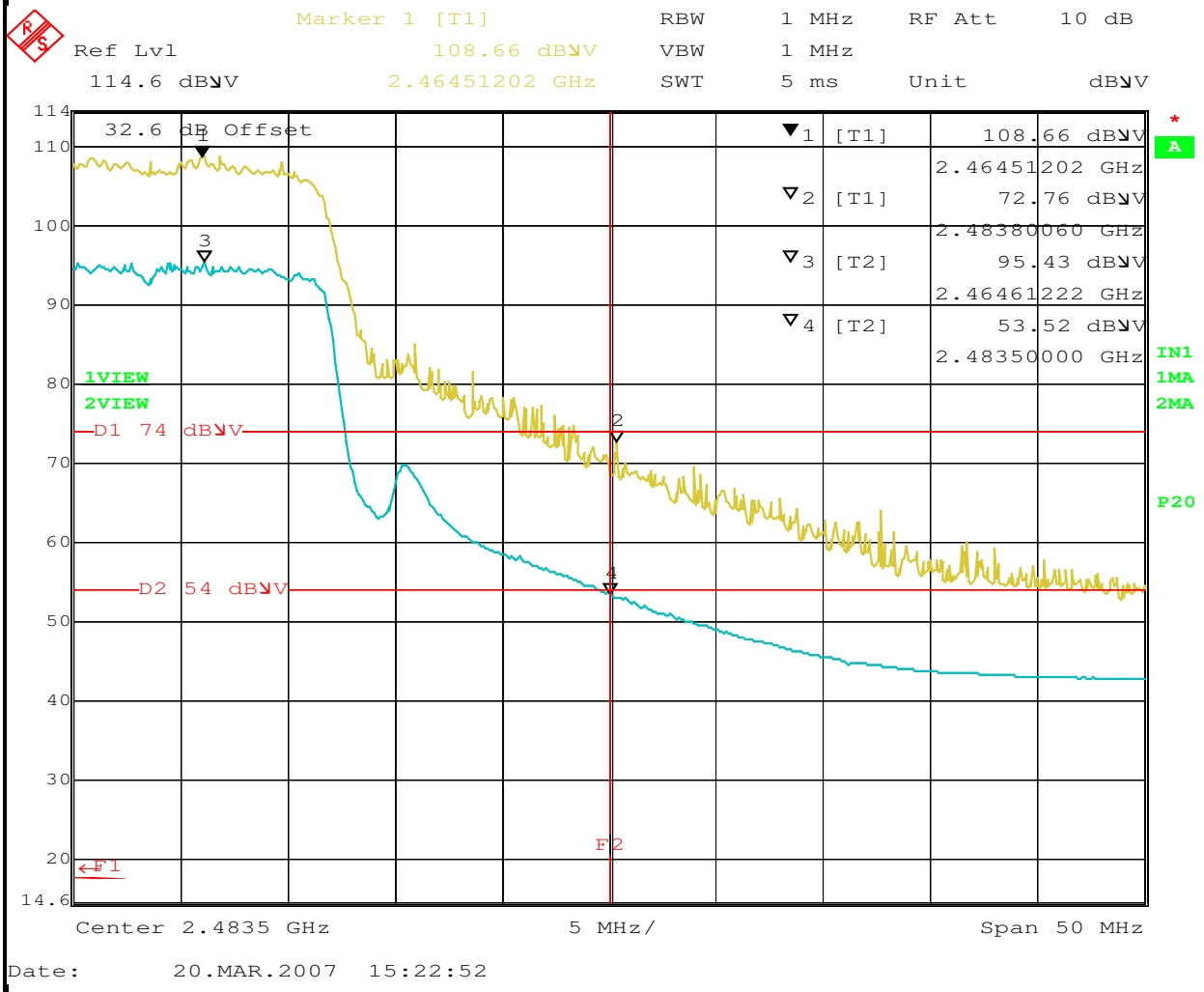
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #2d: Bandedge, 802.11g

Bandedge Power Measurements: Unit was vertical

Power Setting[2]	Frequency (MHz)	Output Power (dBm)[1]	Output Power mW	Antenna Gain (dBi)	Result	EIRP[Note 2] dBm	EIRP W	Output Power (dBm)[3]	Output Power mW
0x44xx	2462	17.0	50.1	3.6	Pass	20.6	0.115		

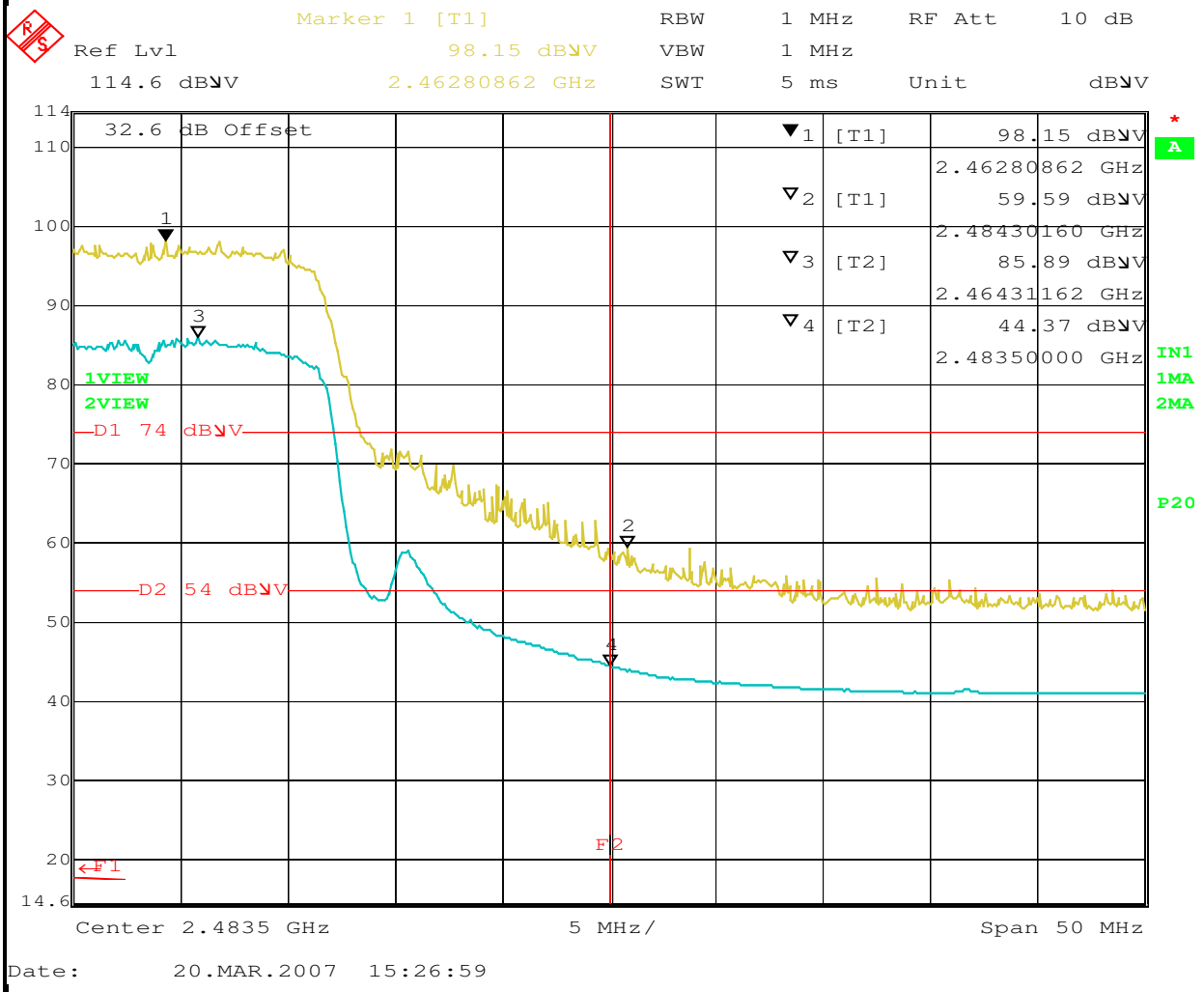
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



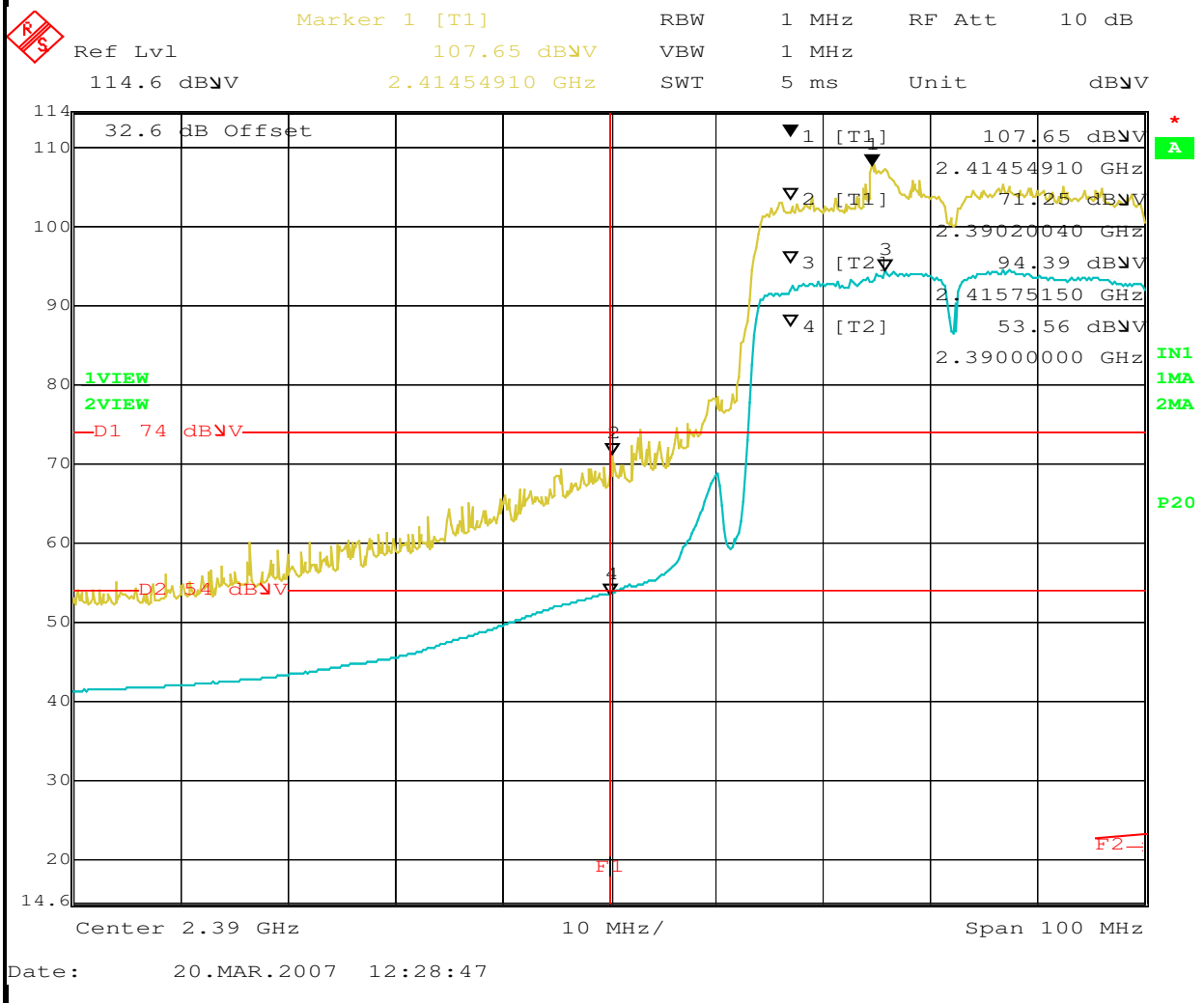
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #3a: Bandedge, 802.11 (SISO)

Bandedge Power Measurements: Unit was vertical

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x43xx	2422	15.5		15.5	3.6		-	19.2	0.082

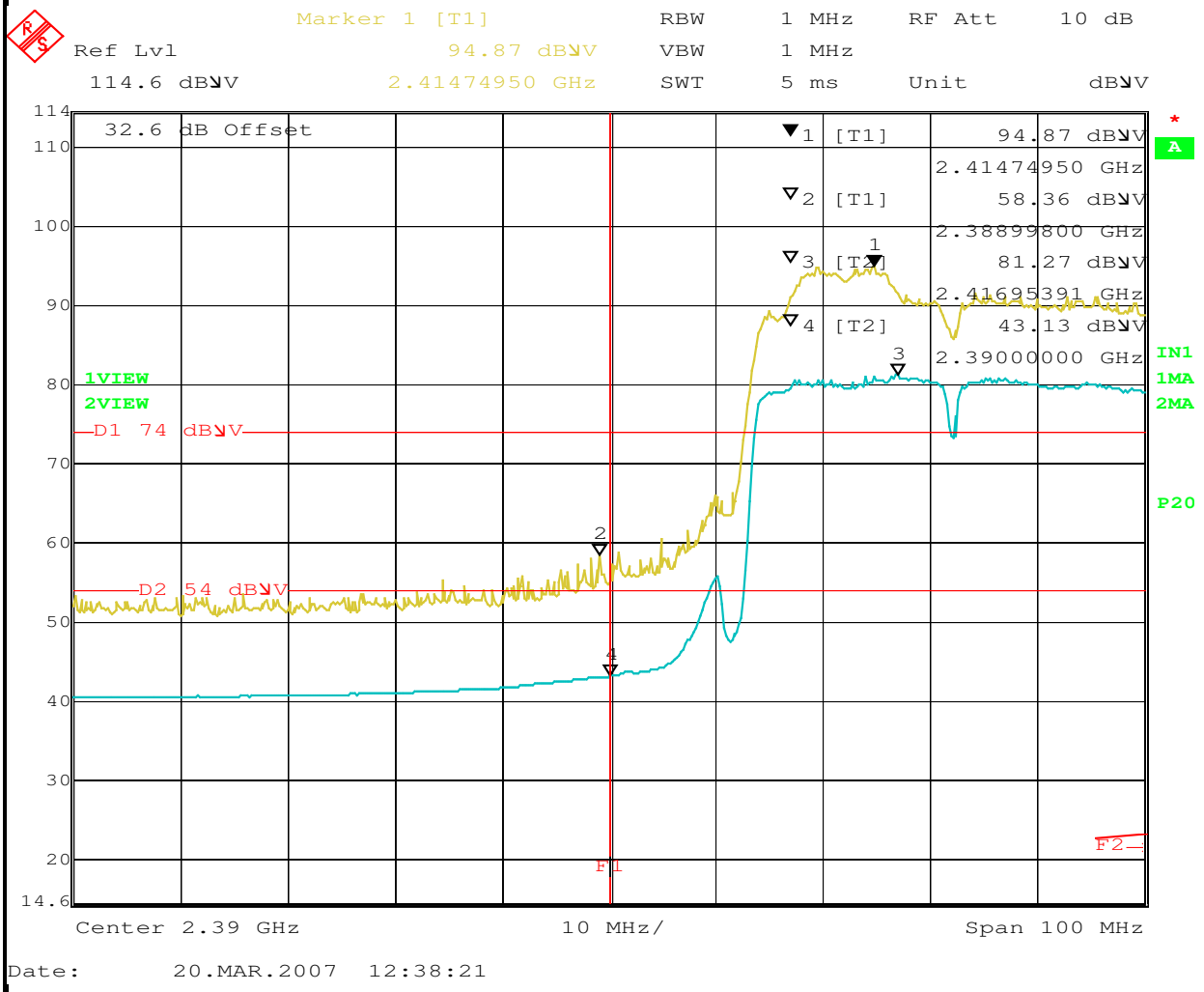
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



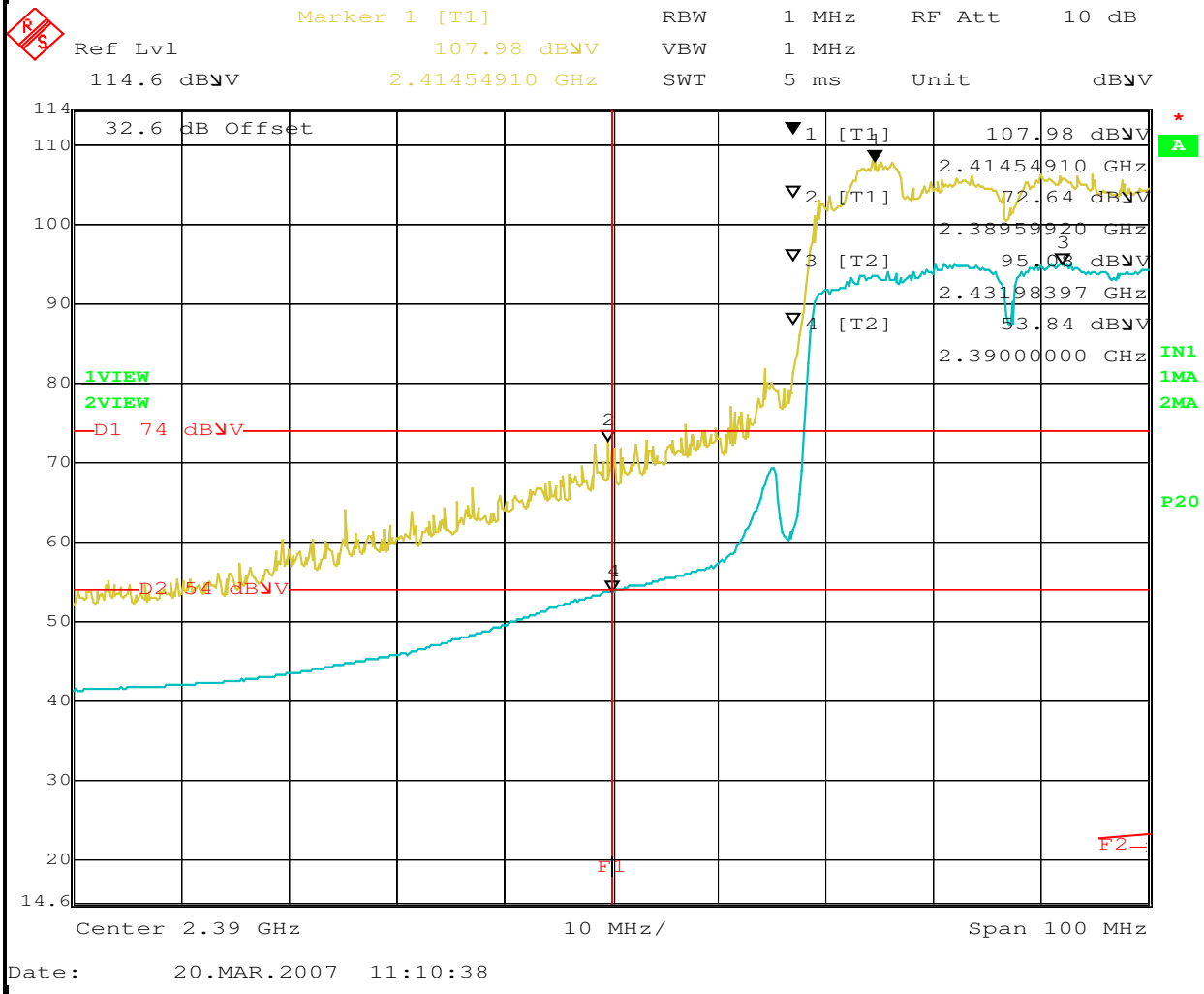
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #3b: Bandedge, 802.11 (SISO)

Bandedge Power Measurements: Unit was vertical

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x41xx	2427	16.5		16.5	3.6		-	20.1	0.103

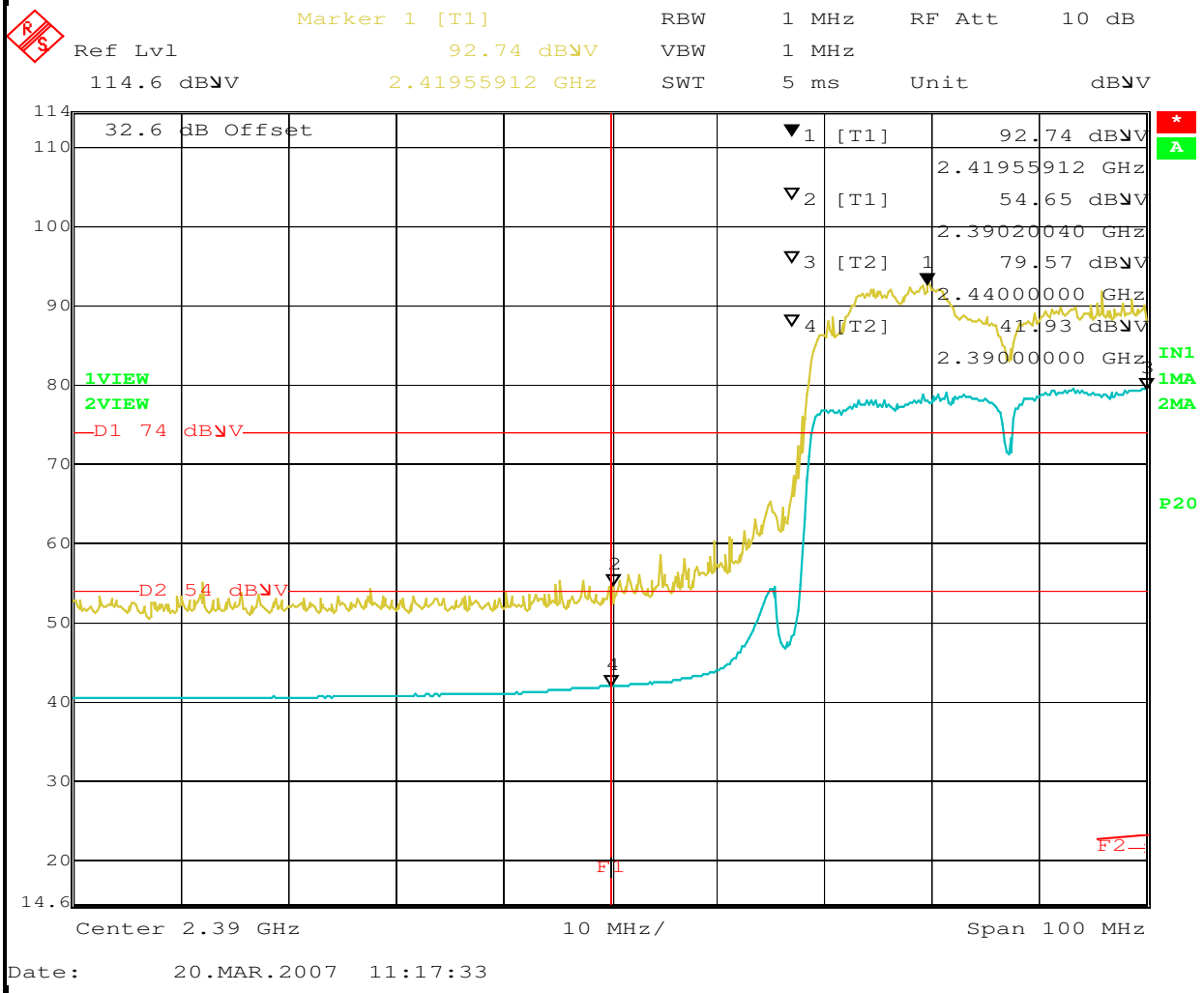
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



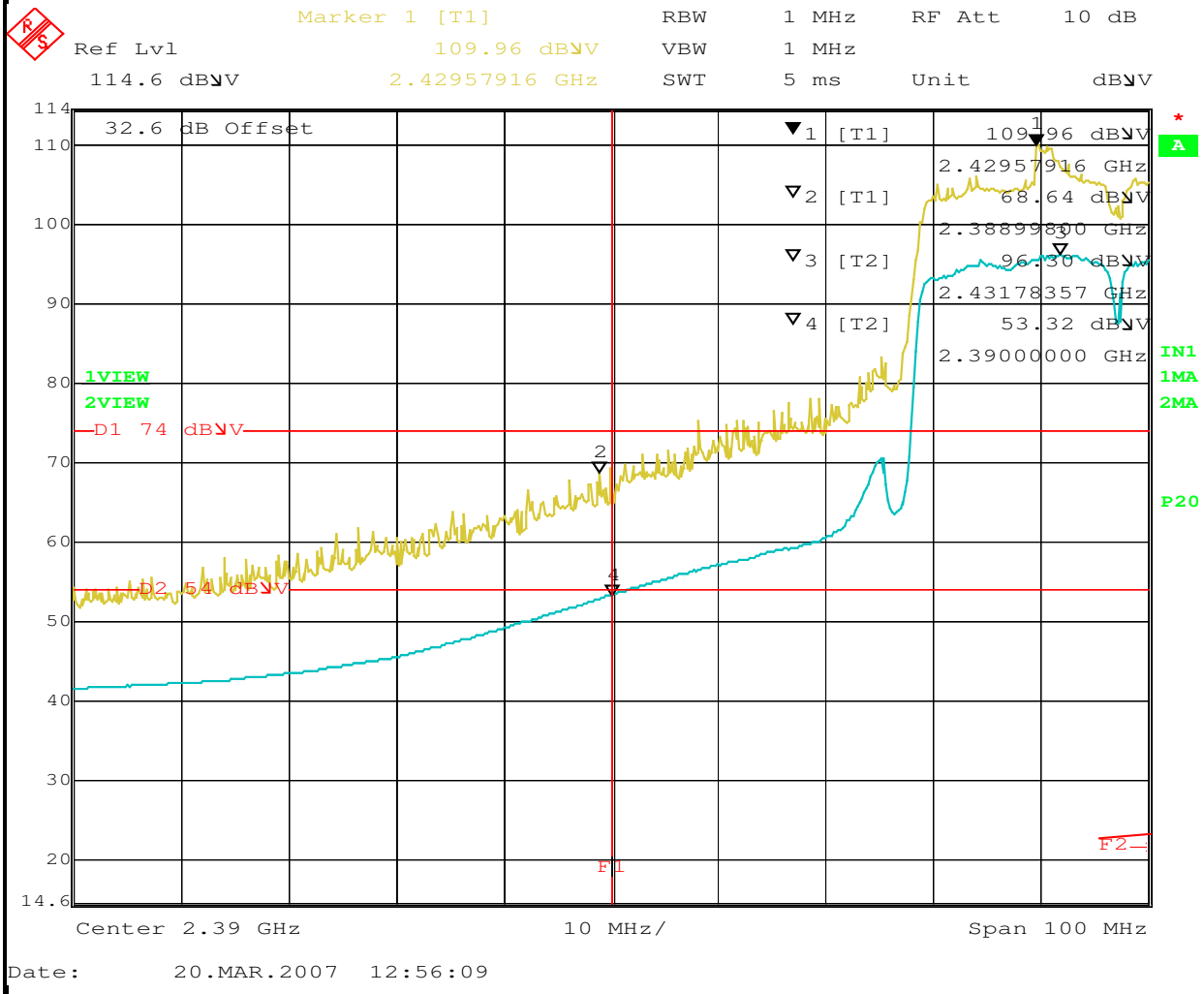
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #3c: Bandedge, 802.11 (SISO)

Bandedge Power Measurements: Unit was vertical

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x3dxx	2437	17.5		17.5	3.6		-	21.1	0.130

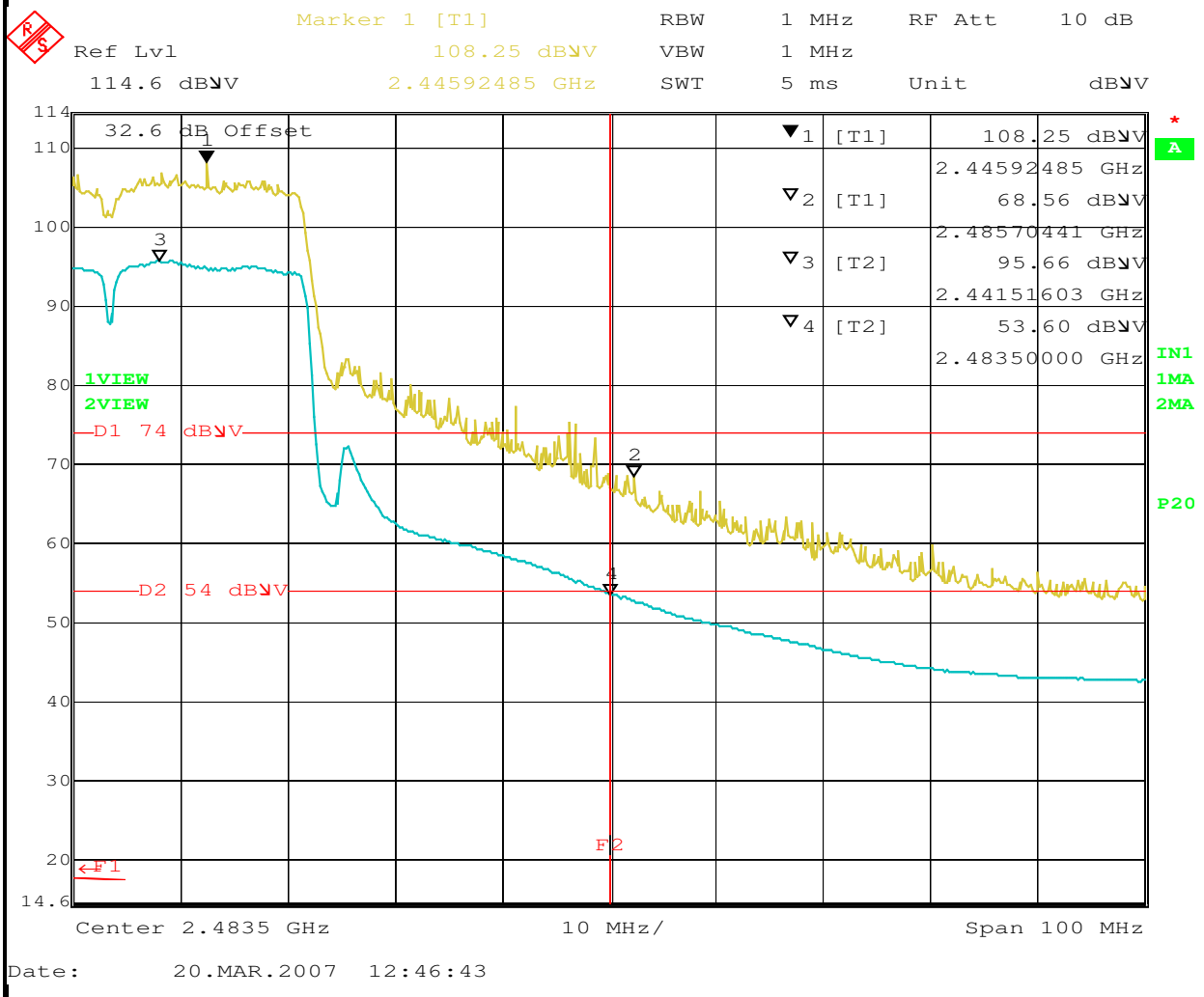
Low Vertical



EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

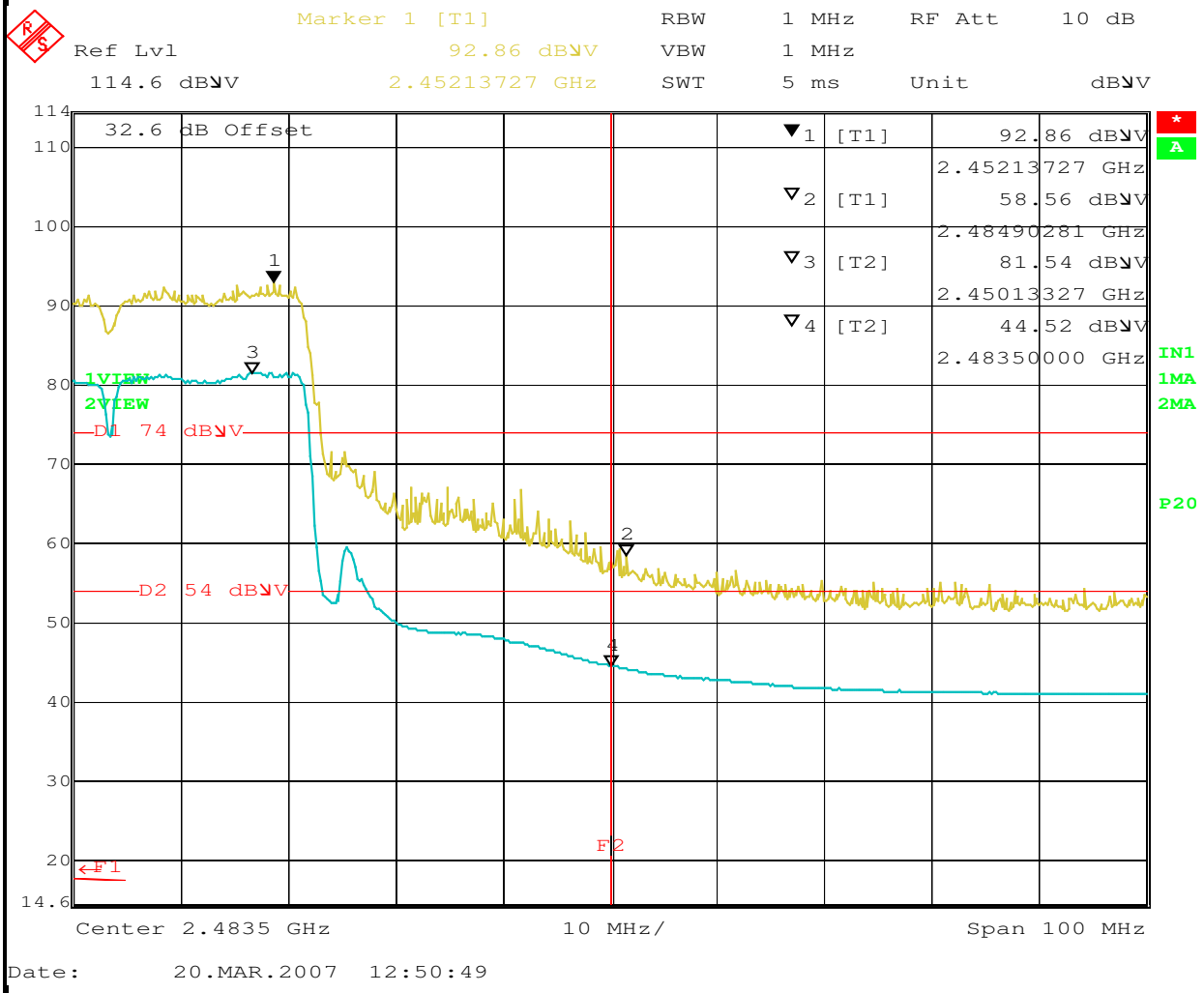
High Vertical



EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

High Horizontal



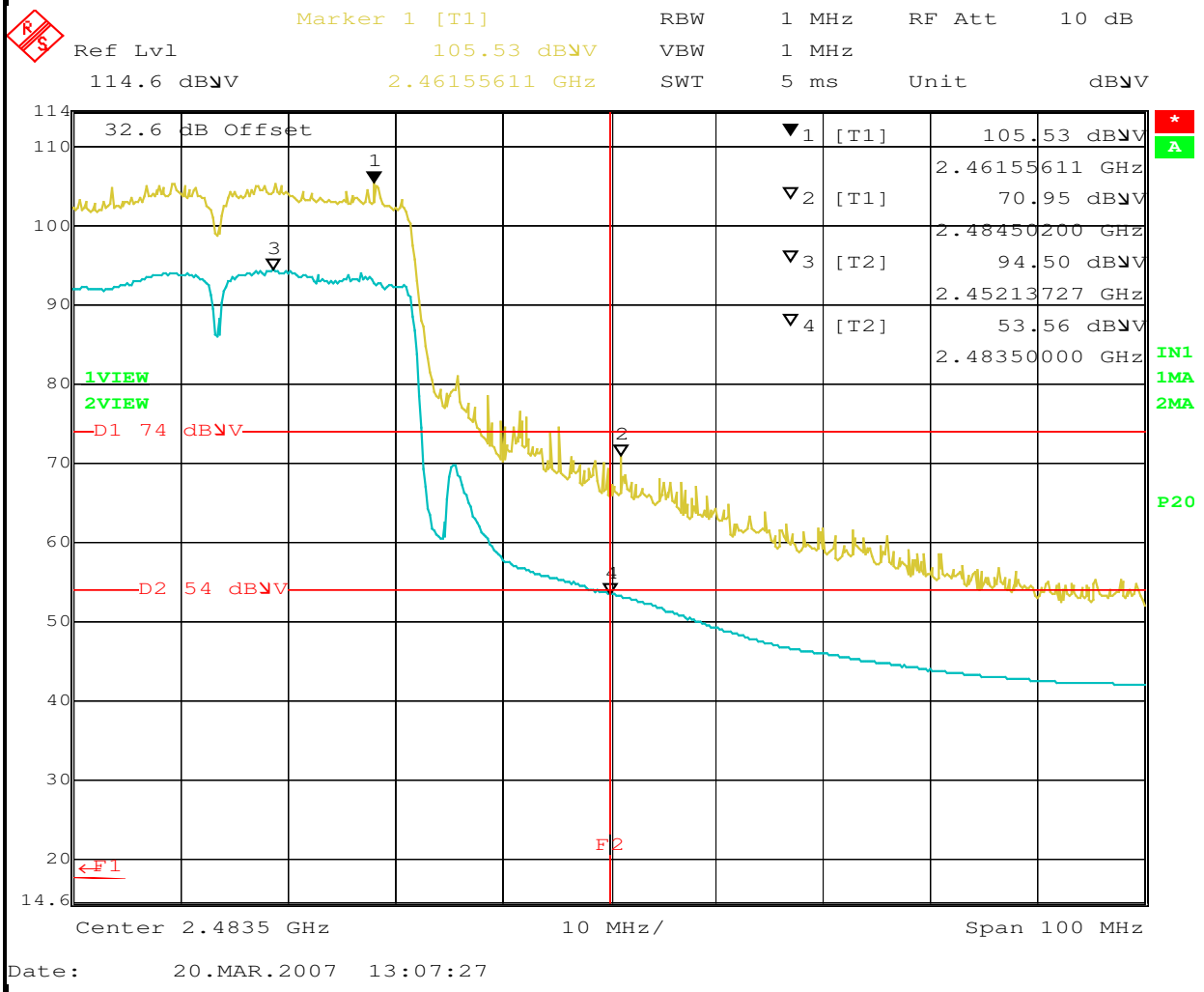
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #3d: Bandedge, 802.11 (SISO)

Bandedge Power Measurements: Unit was vertical

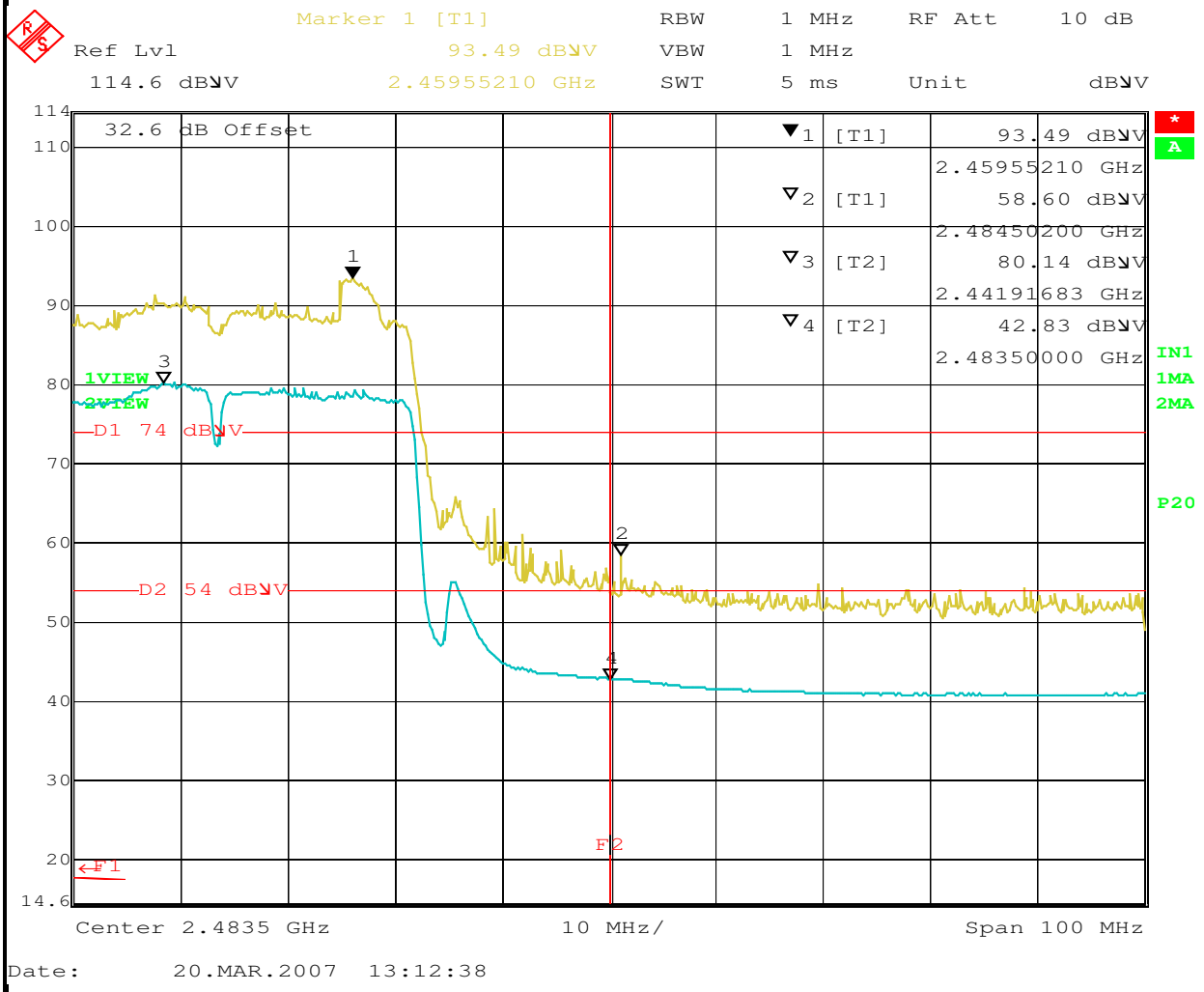
Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x46xx	2447	16.0		16.0	3.6		-	19.6	0.092

Vertical



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



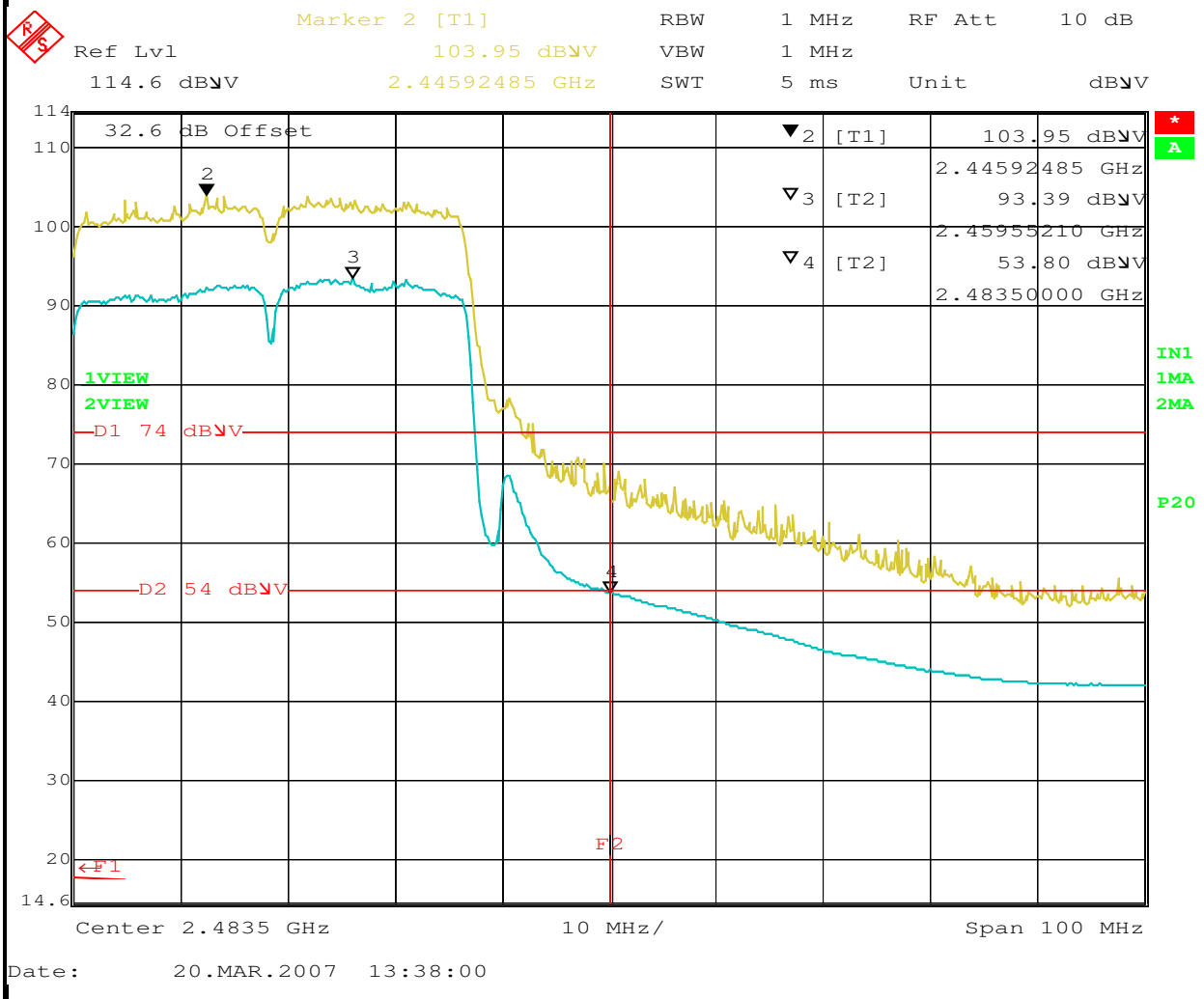
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #3e: Bandedge, 802.11 (SISO)

Bandedge Power Measurements: Unit was vertical

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x48xx	2452	15.5		15.5	3.6		-	19.2	0.082

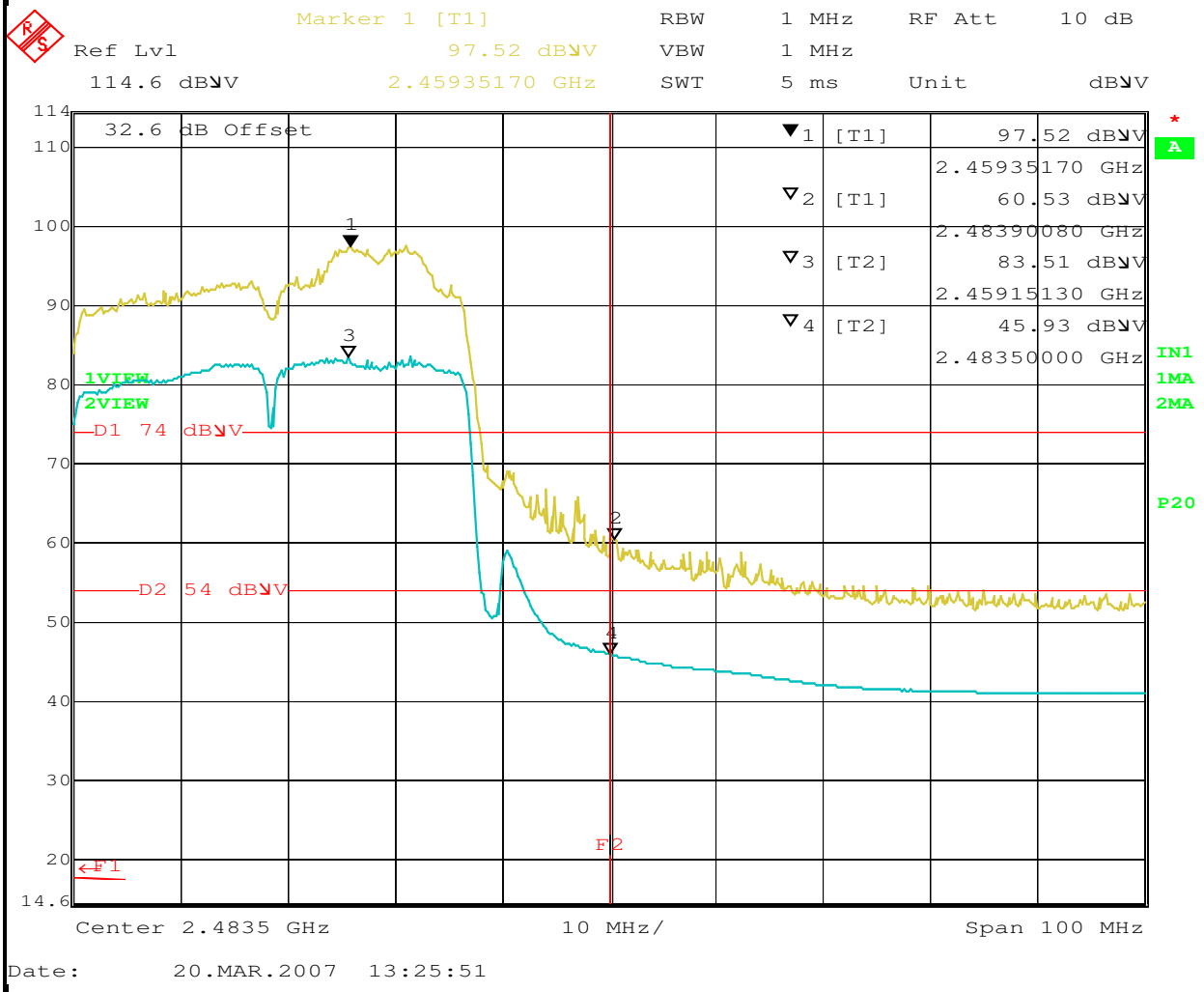
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



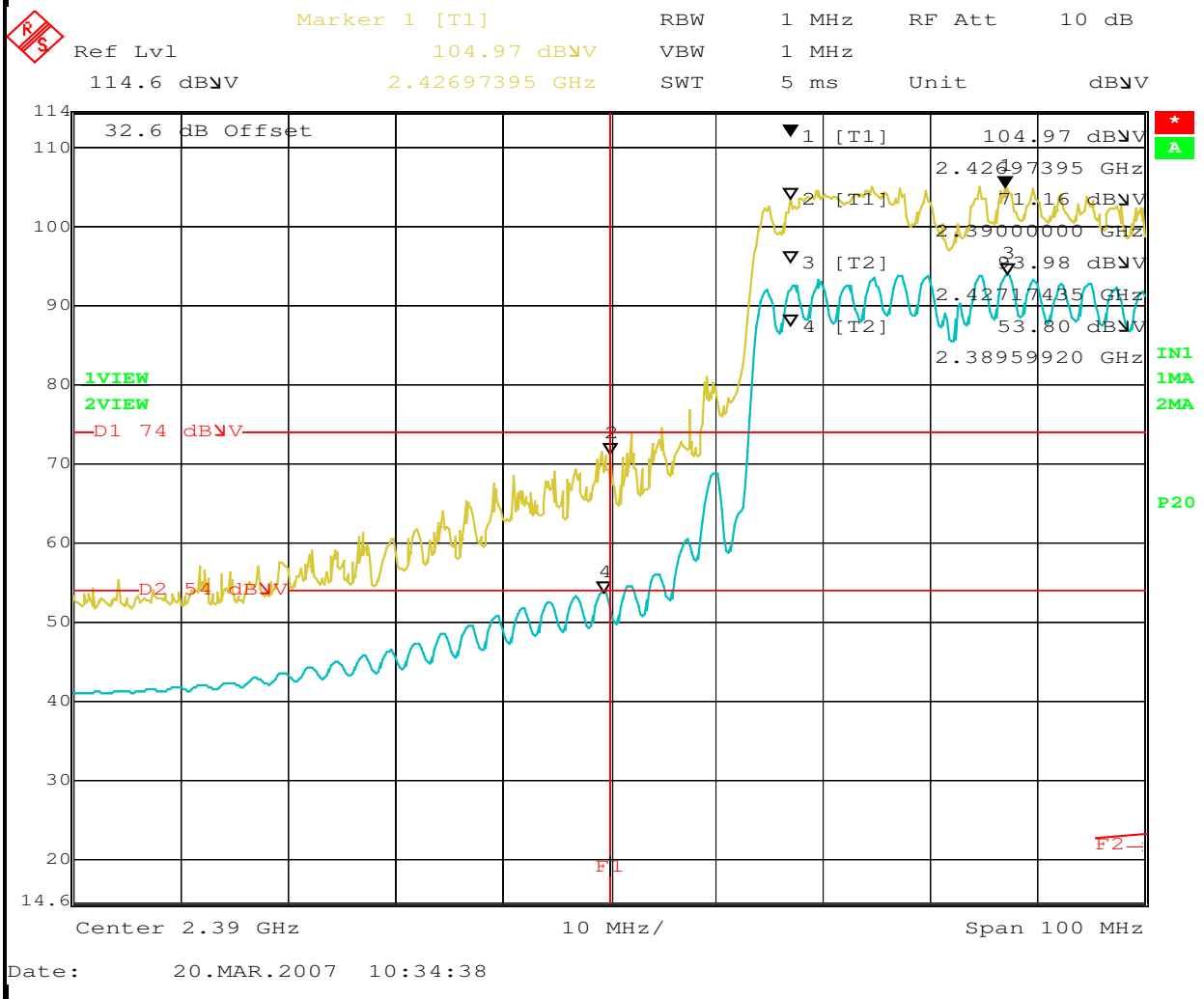
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #4a: Bandedge, 802.11n 40 MHz

Bandedge Power Measurements: Unit was vertical

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x3F3D	2422	16.0	16.4	19.2	3.6	3.6	-	22.8	0.191

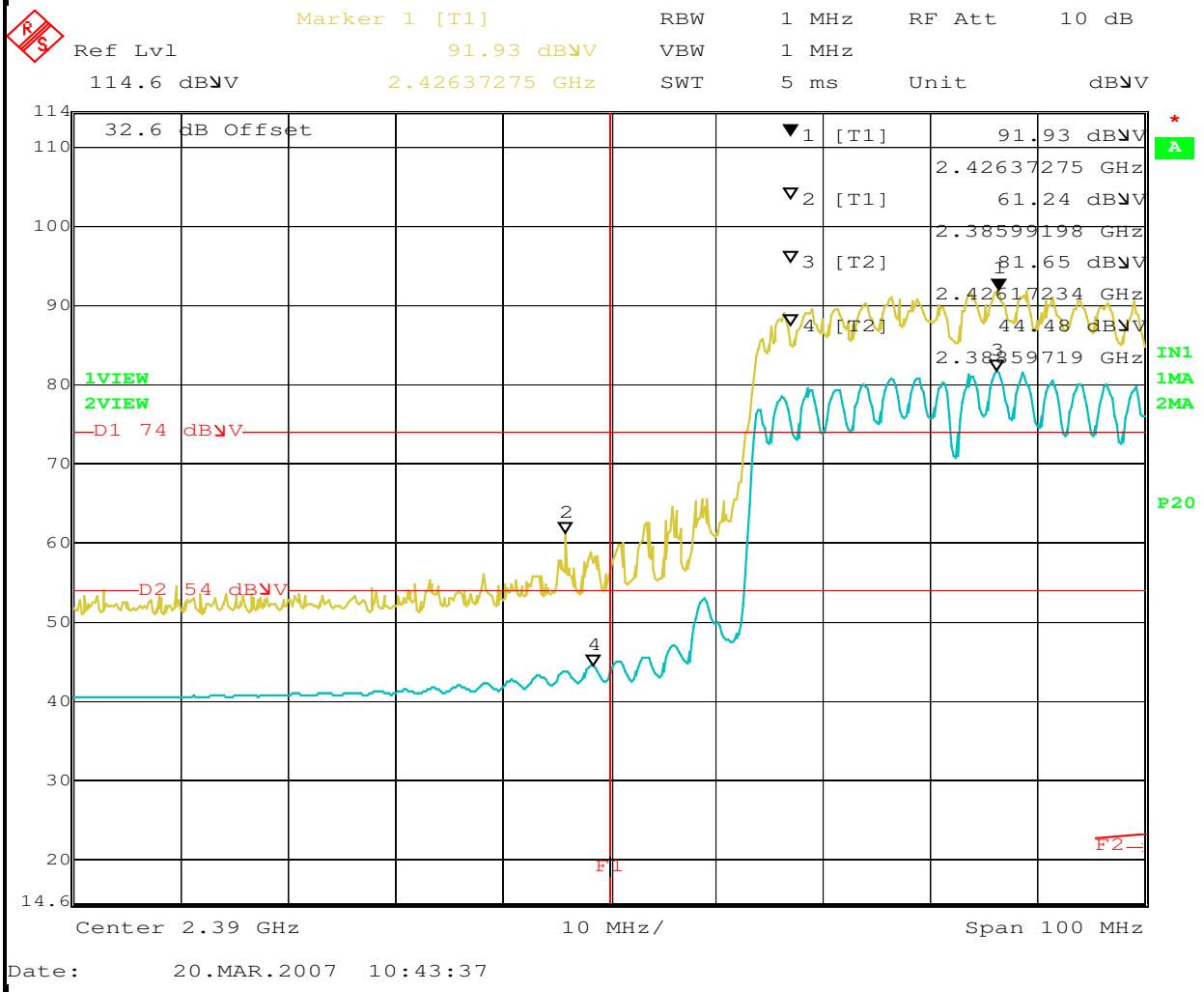
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



Date: 20.MAR.2007 10:43:37

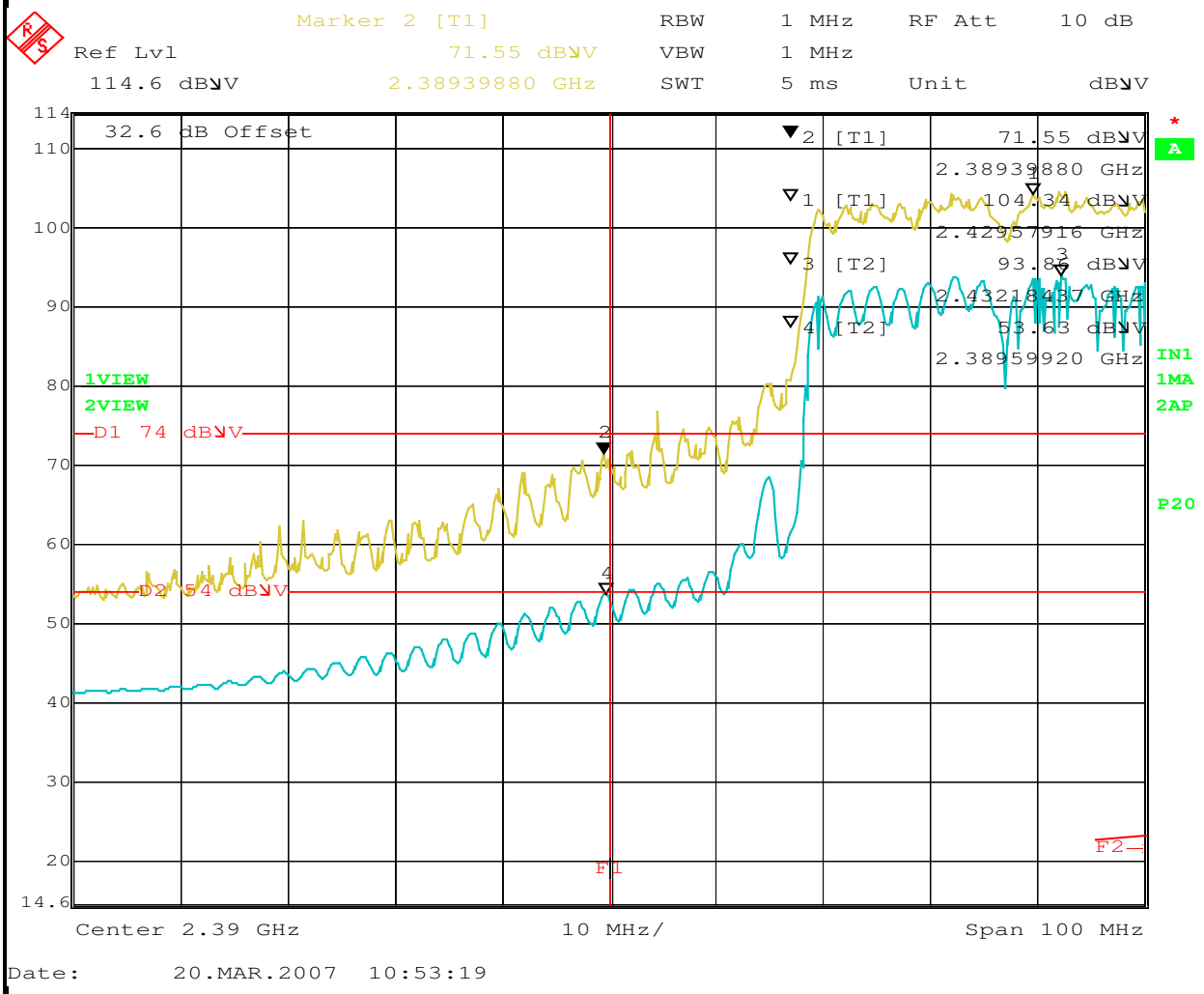
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #4b: Bandedge, 802.11n 40 MHz

Bandedge Power Measurements: Unit was vertical

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x3e3d	2427	16.5	16.5	19.5	3.6	3.6	-	23.1	0.205

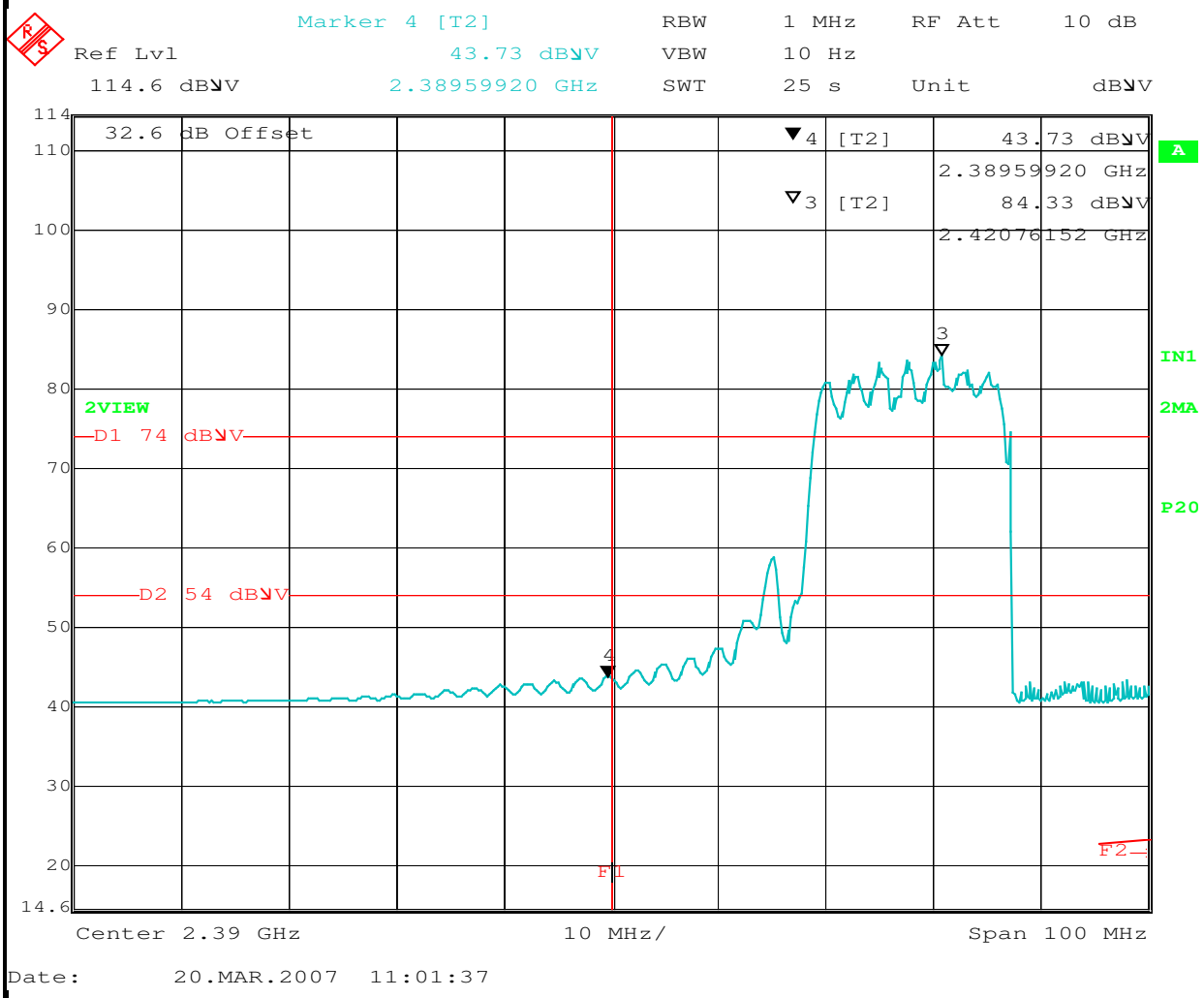
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



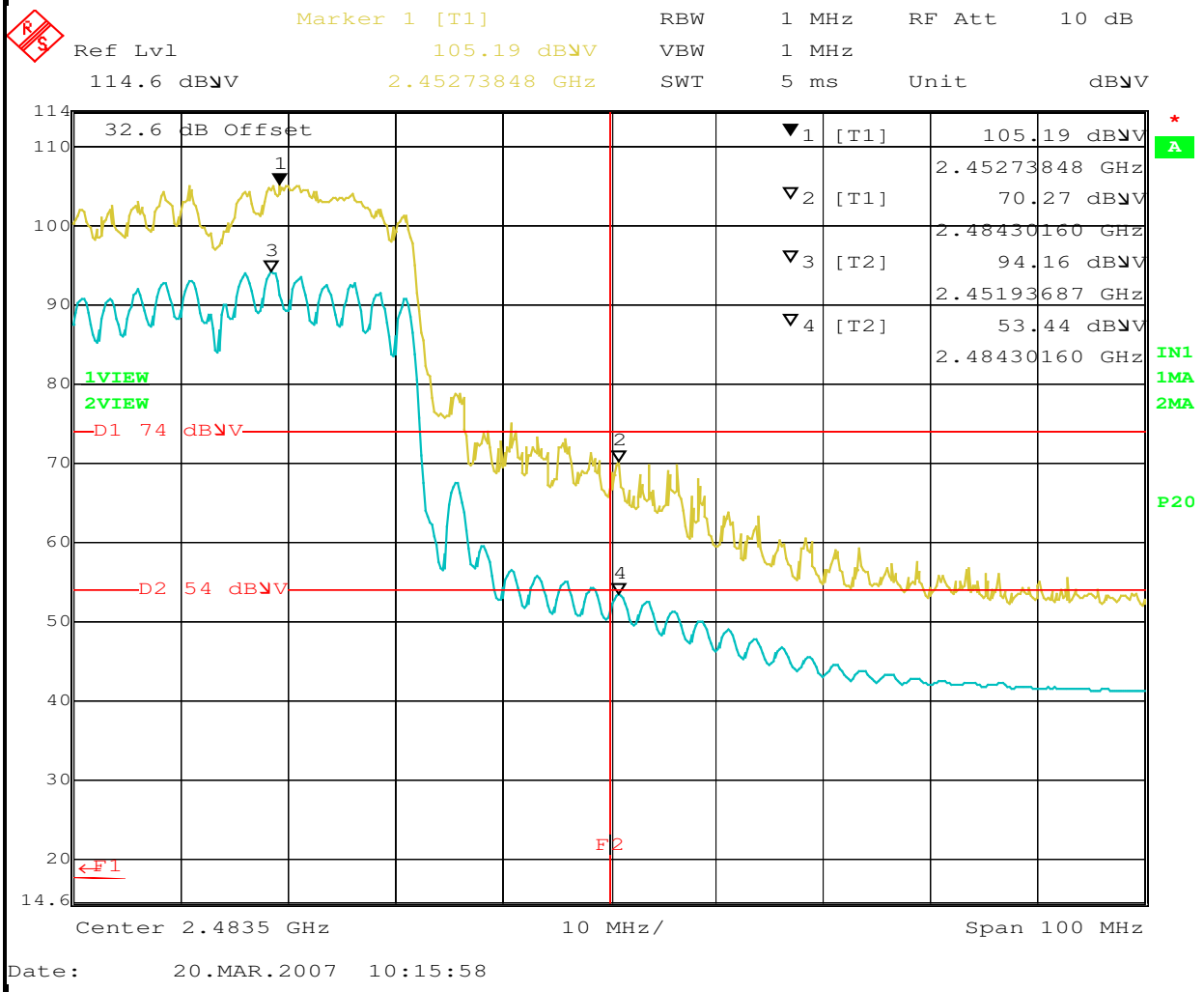
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #4c: Bandedge, 802.11n 40 MHz

Bandedge Power Measurements: Unit was vertical

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x423e	2447	16.5	16.5	19.5	3.6	3.6	-	23.1	0.205

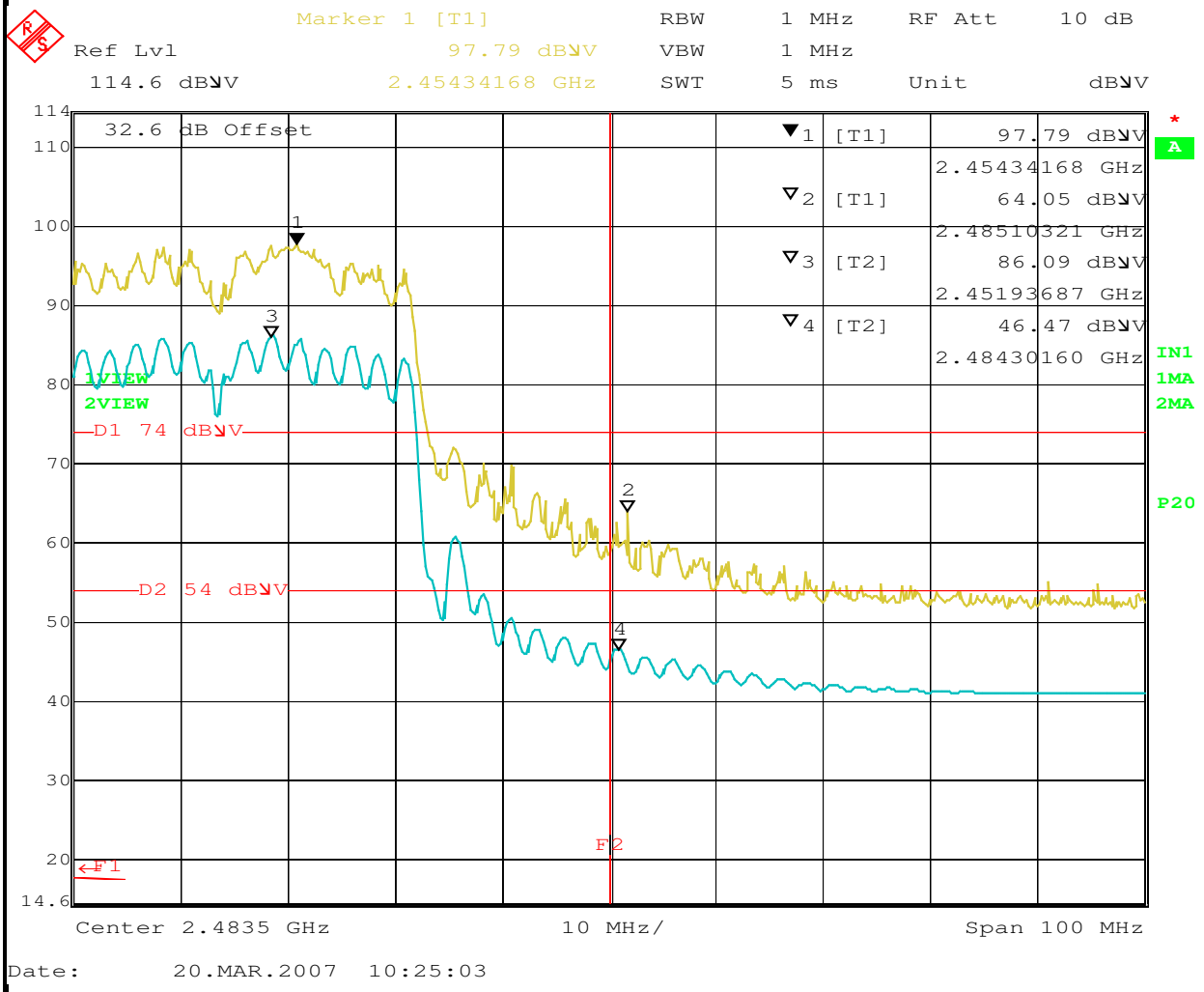
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



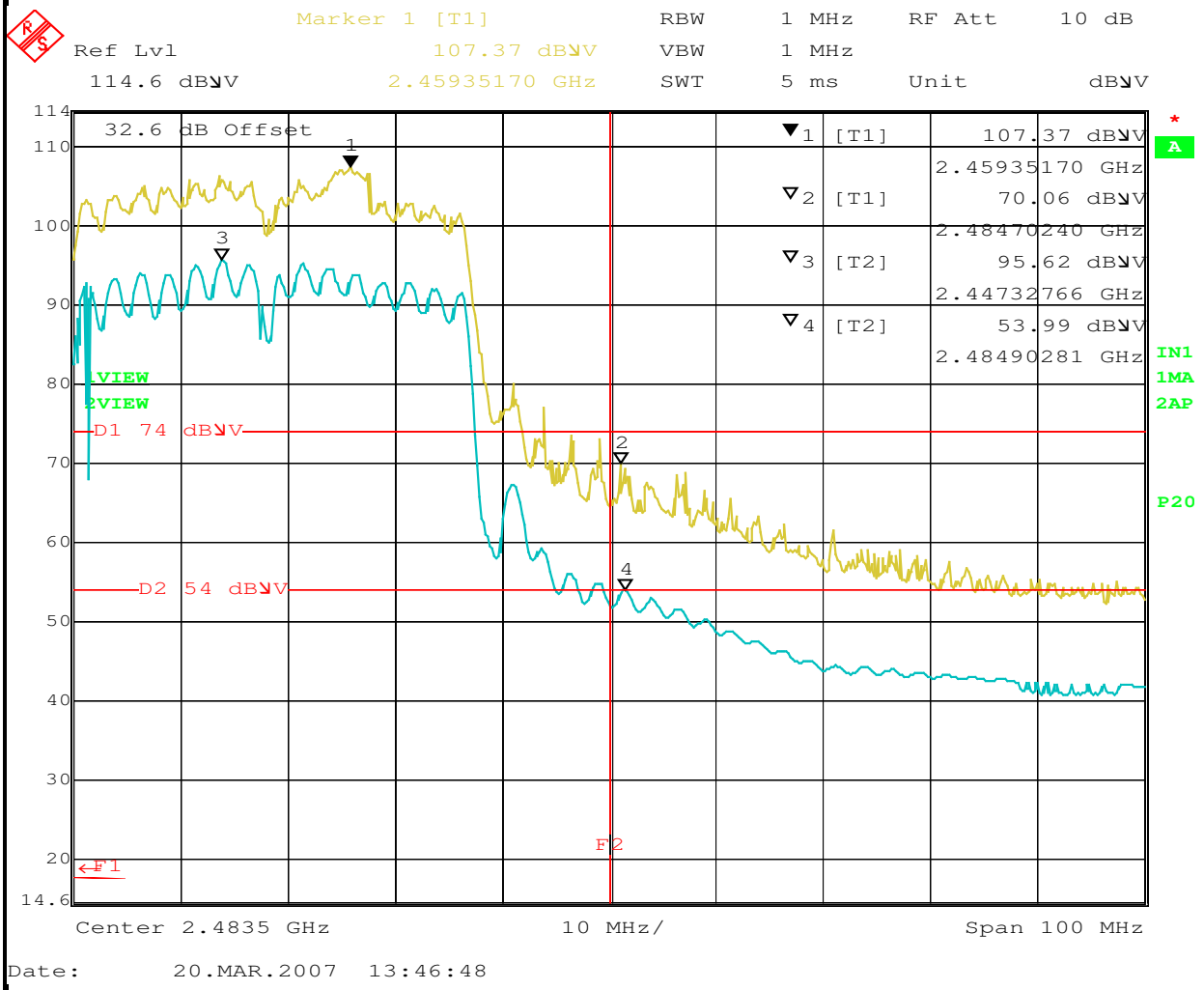
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #4d: Bandedge, 802.11n 40 MHz

Bandedge Power Measurements: Unit was vertical

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x4A46	2452	15.0	15.0	18.0	3.6	3.6	-	21.6	0.145

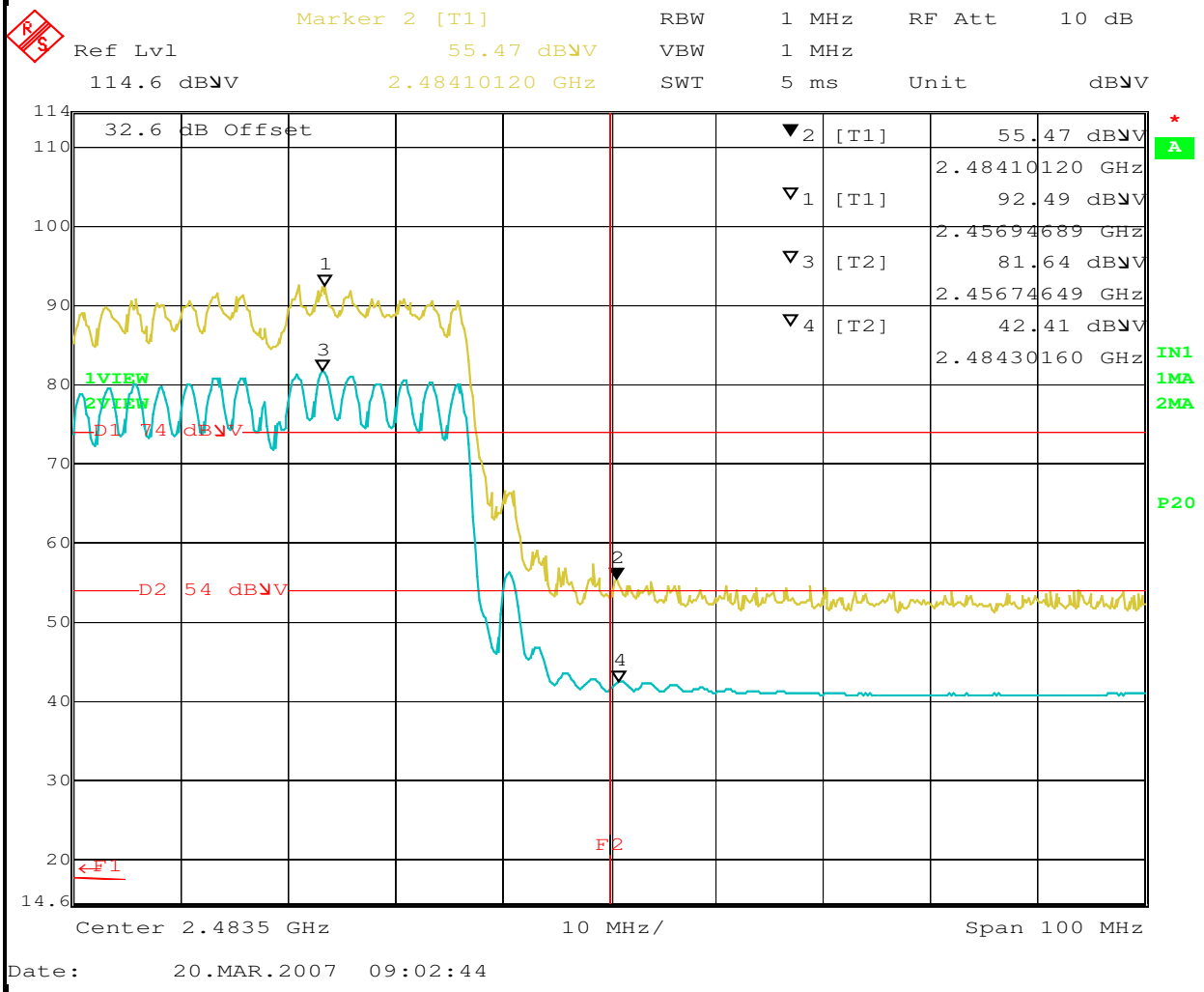
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



Elliott — EMC Test Data

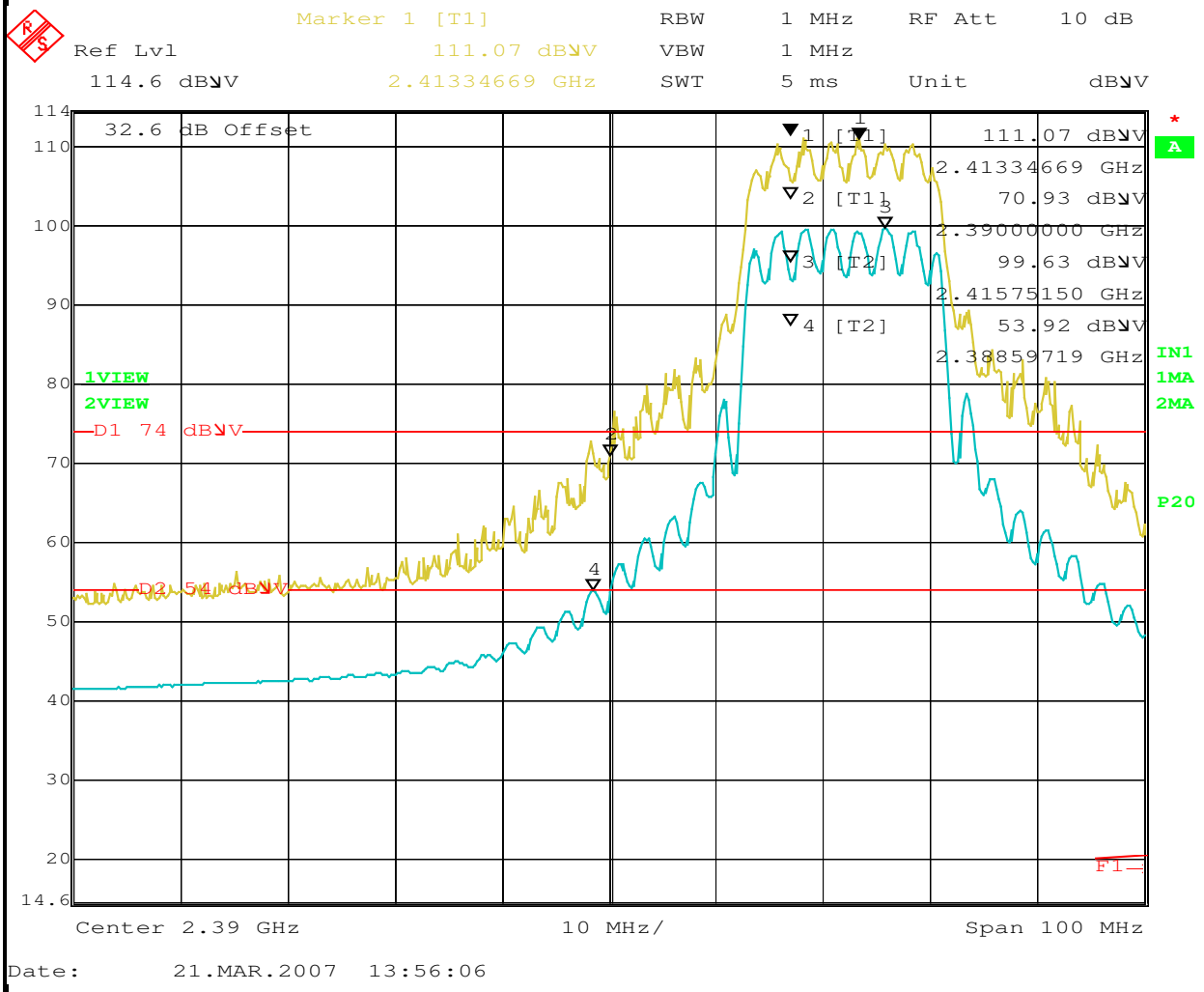
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #5a: Bandedge, 802.11n 20 MHz

Bandedge Power Measurements: Unit was vertical

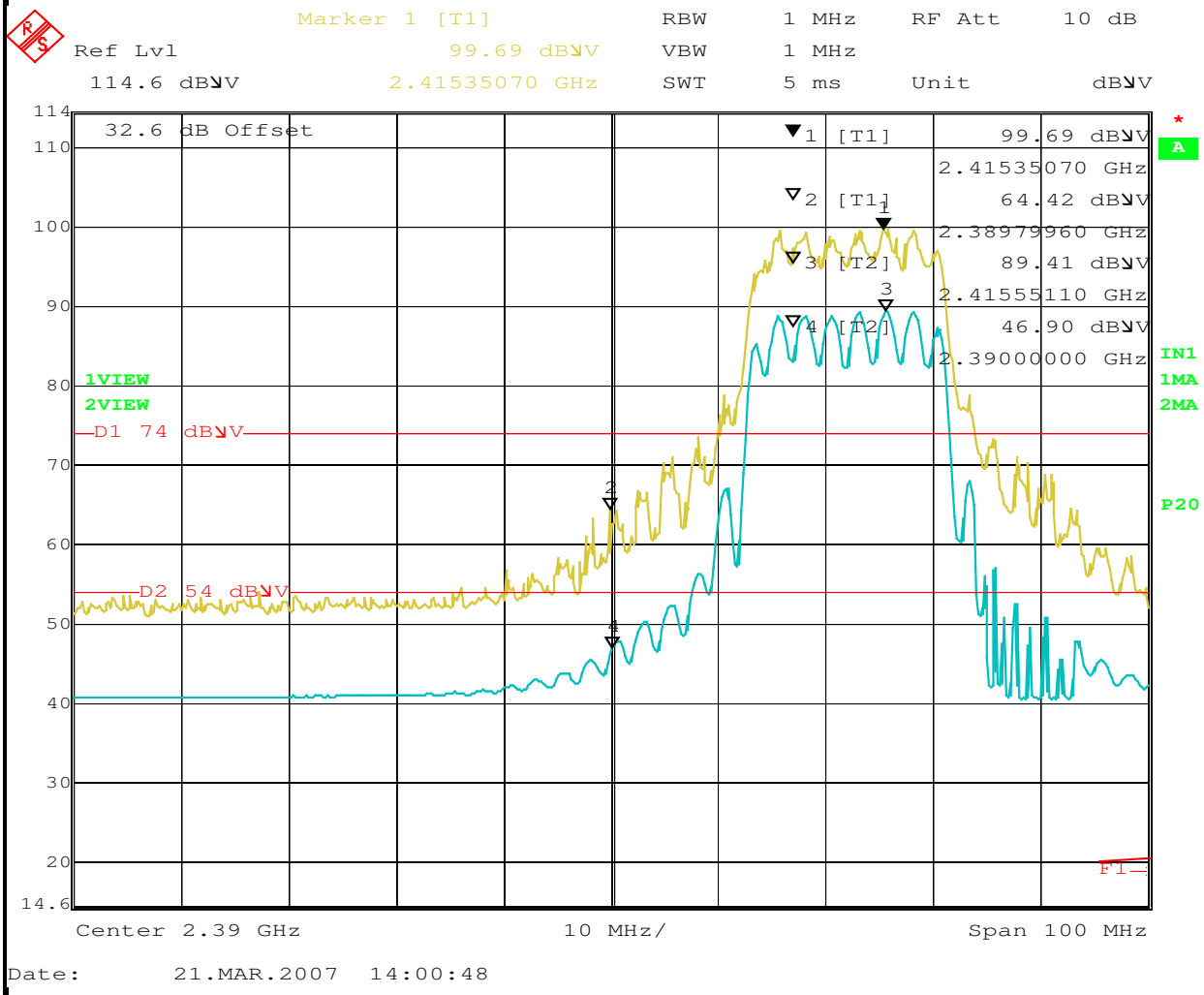
Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x433E	2412	17.0	17.0	20.0	3.6	3.6	-	23.6	0.230

Vertical



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



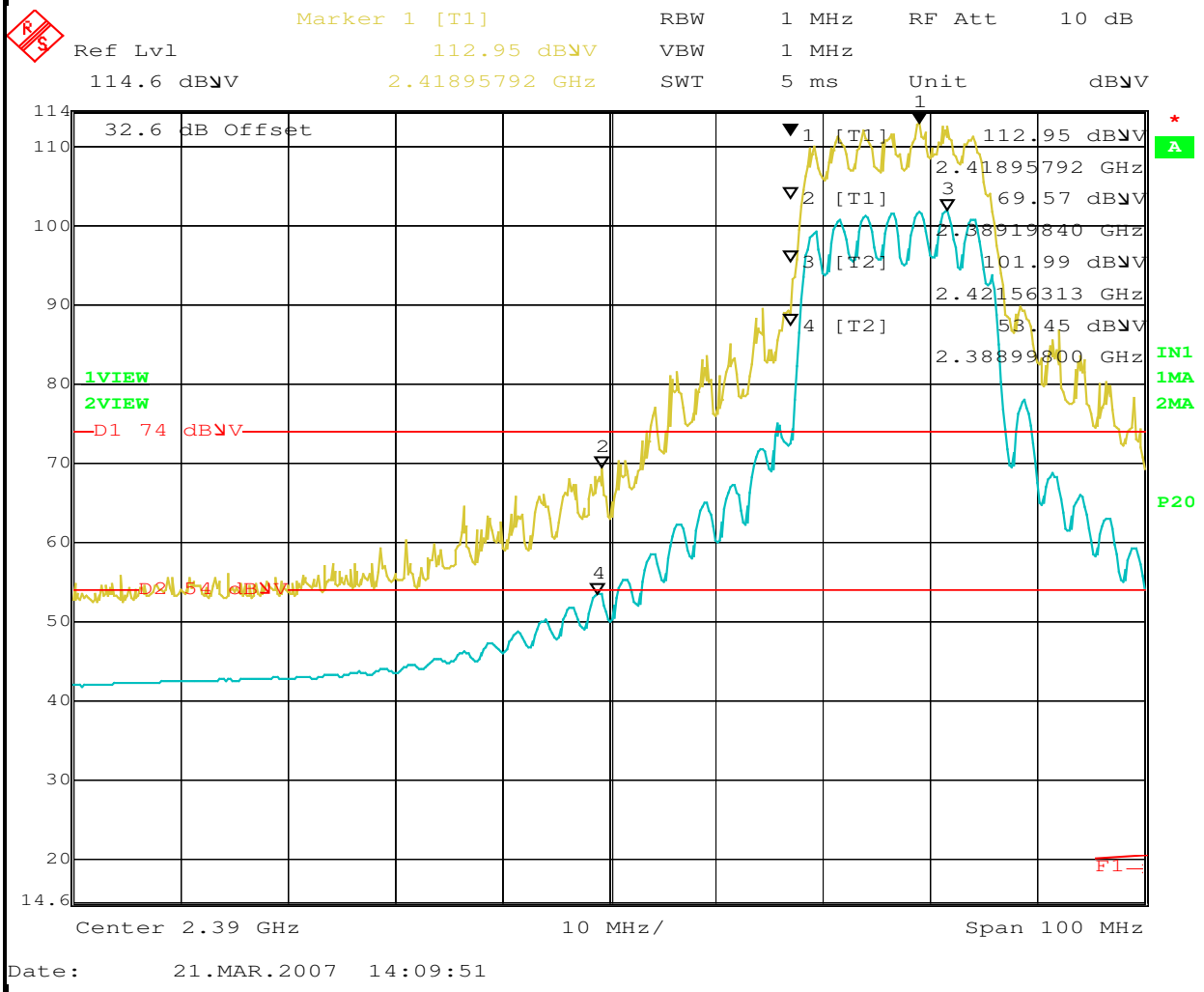
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #5b: Bandedge, 802.11n 20 MHz

Bandedge Power Measurements: Unit was vertical

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x3F3A	2417	18.5	18.5	21.5	3.6	3.6	-	25.1	0.324

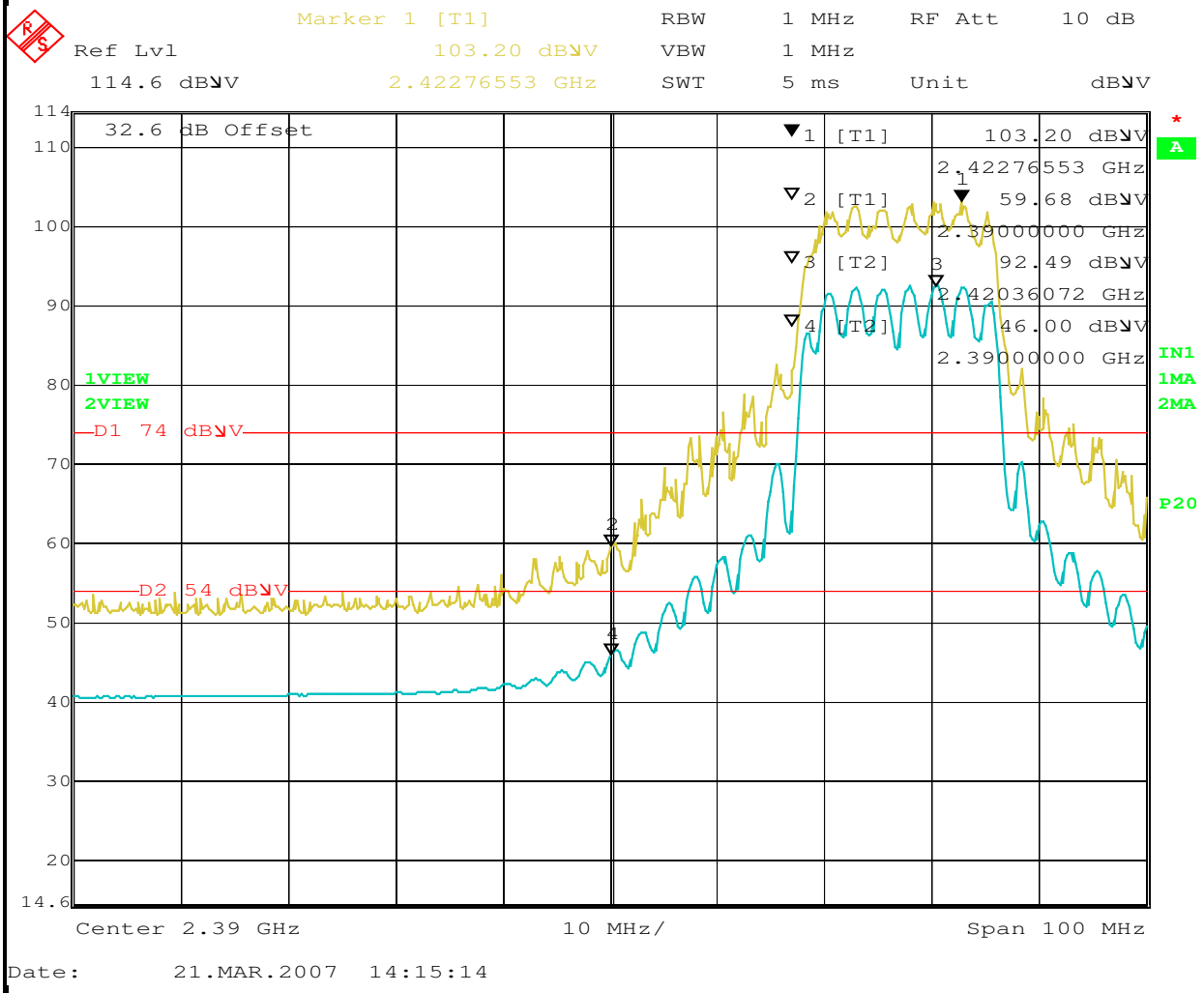
Vertical



EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



Elliott — EMC Test Data

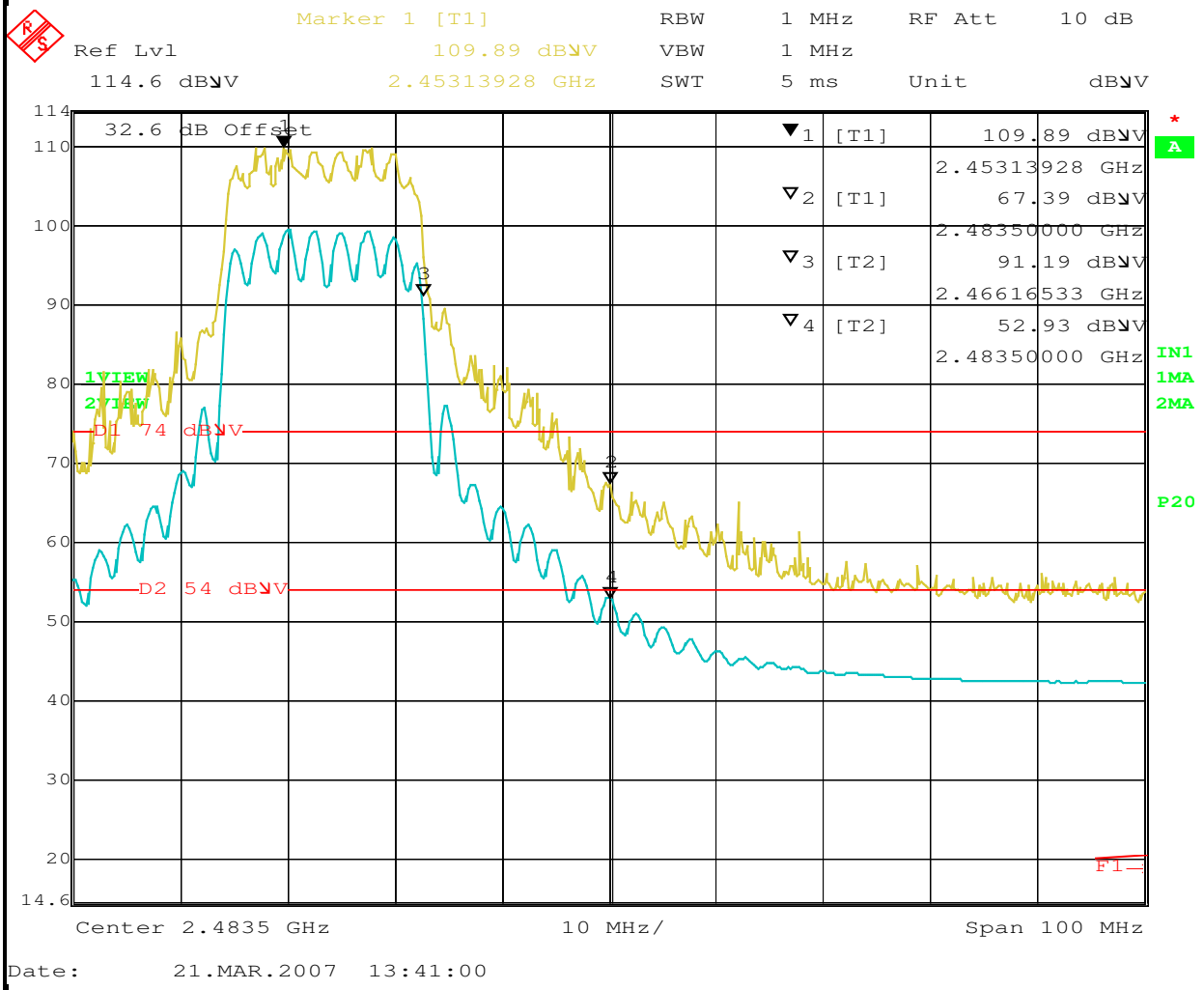
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #5c: Bandedge, 802.11n 20 MHz

Bandedge Power Measurements: Unit was vertical

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x433E	2457	18.5	18.5	21.5	3.6	3.6	-	25.1	0.324

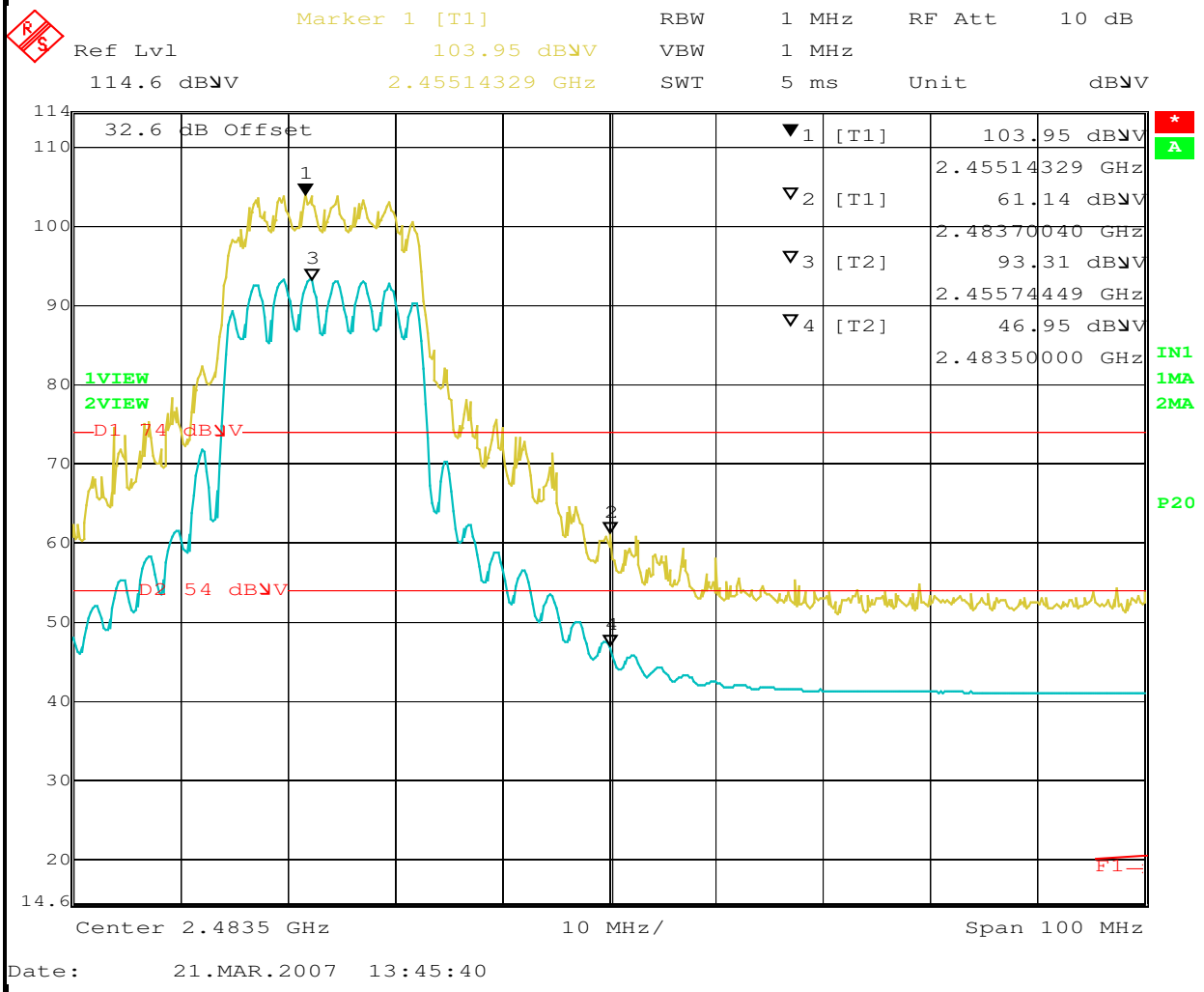
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



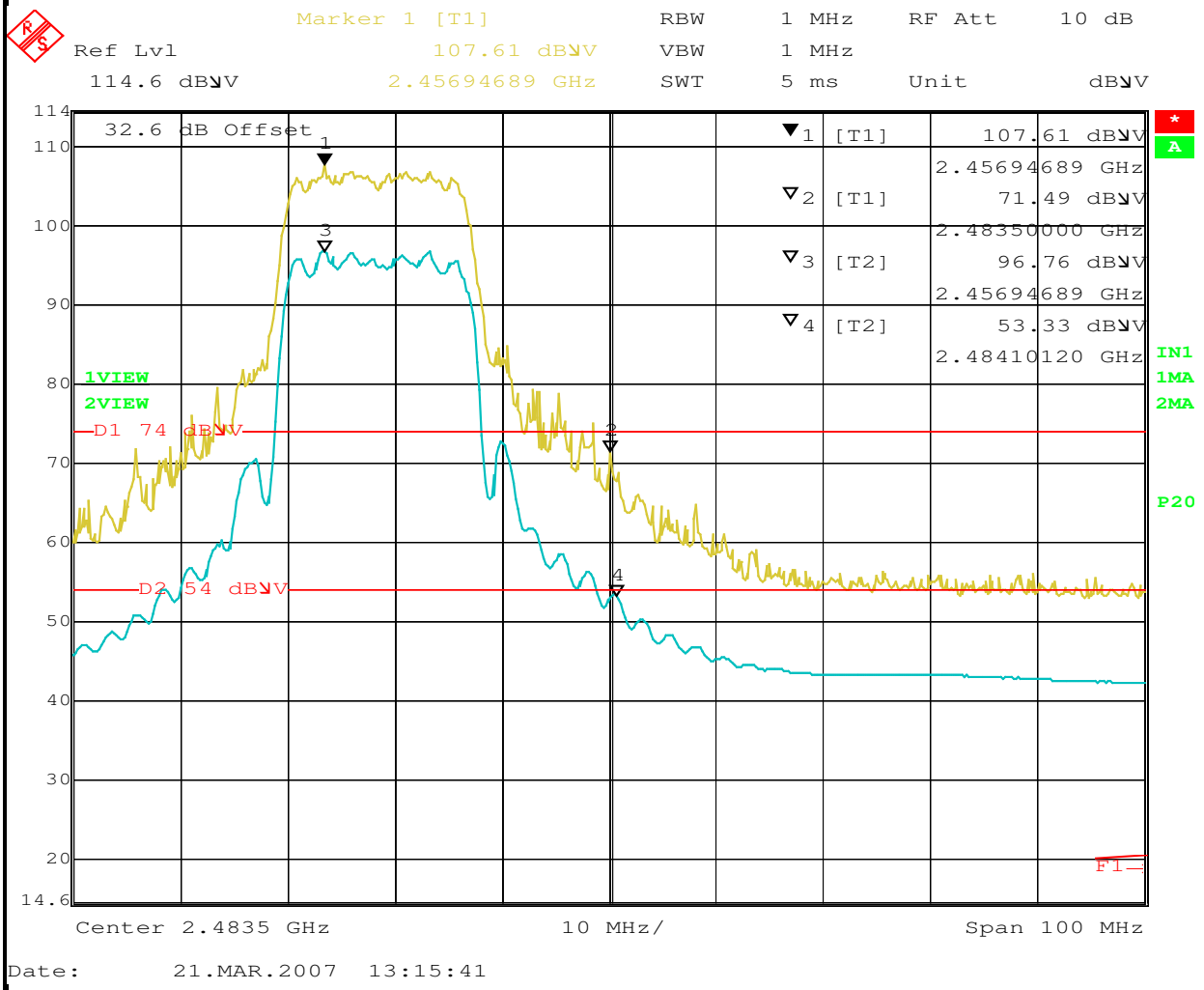
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #5c: Bandedge, 802.11n 20 MHz

Bandedge Power Measurements: Unit was vertical

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x4C4C	2462	16.5	16.5	19.5	3.6	3.6	-	23.1	0.205

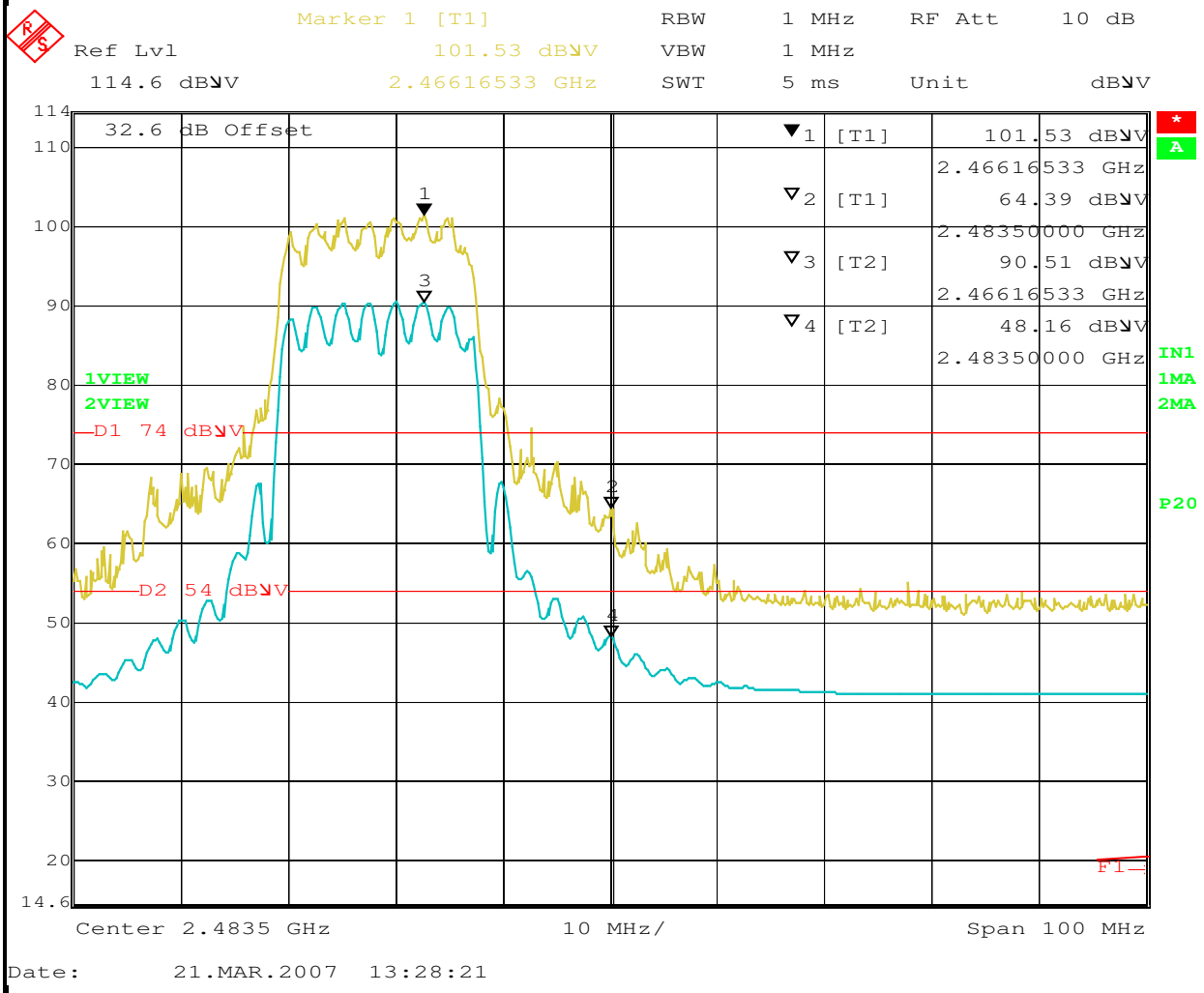
Vertical



Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Horizontal



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
Power, Bandwidth and Spurious Emissions (802.11b)

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 3/20/2007
Test Engineer: Juan Martinez
Test Location: Fremont Chamber #3

Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:

Temperature: 18 °C
Rel. Humidity: 37 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Output Power	15.247(b)	Pass	20.3 dBm
2	Power spectral Density (PSD)	15.247(d)	Pass	6.5 dBm/3kHz
3	6dB Bandwidth	15.247(a)	Pass	10.2 MHz
3	99% Bandwidth	RSS GEN	-	13.7 MHz
4	Spurious emissions	15.247(b)	Pass	Refer to plots

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1: Output Power

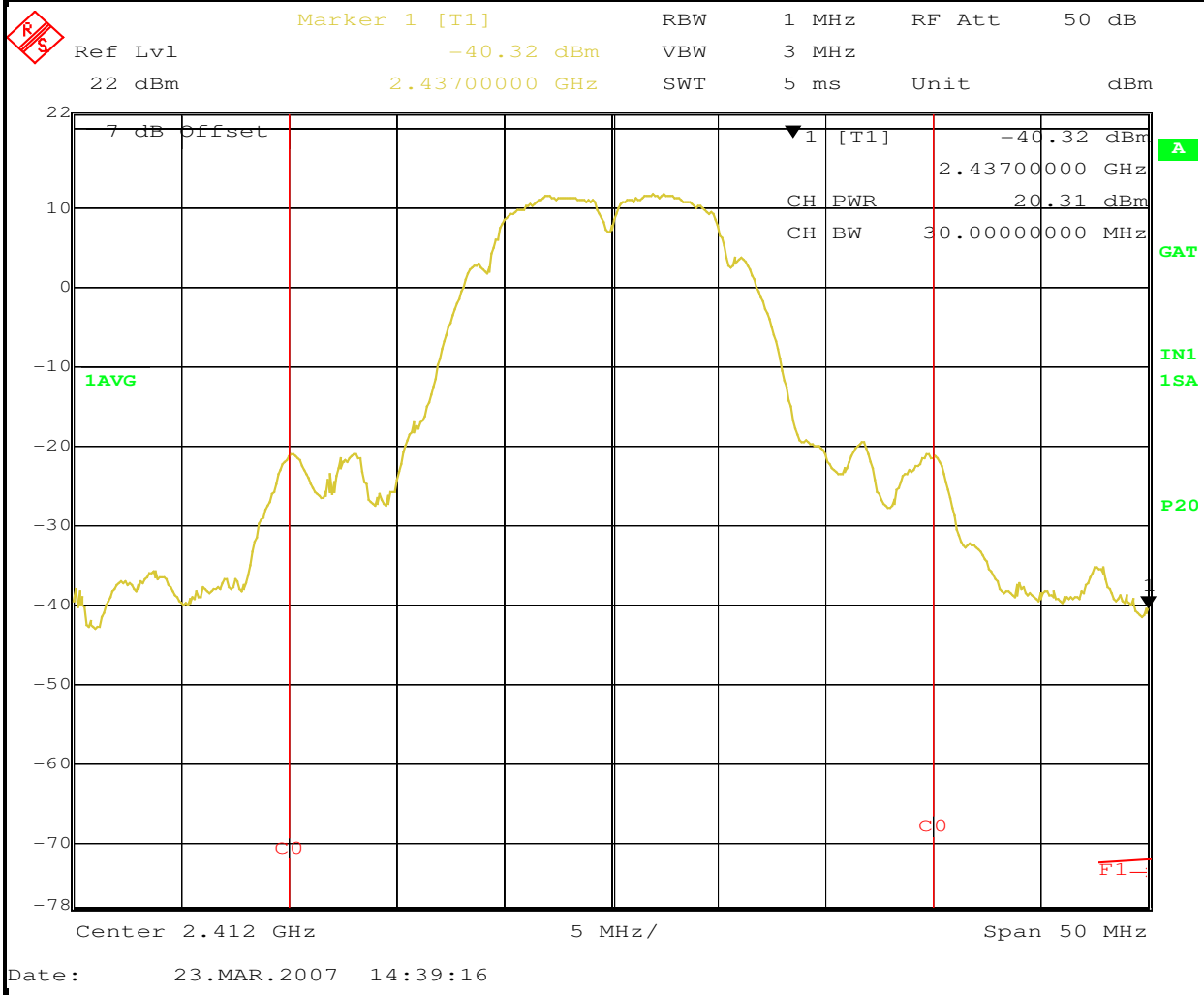
ESIB Power measurement table

Power Setting[2]	Frequency (MHz)	Output Power (dBm)[1]	Output Power mW	Antenna Gain (dBi)	Result	EIRP[Note 2] dBm	EIRP[Note 2] W	Output Power (dBm)[3]	Output Power mW
0x40xx	2412	20.3	107.2	3.6	Pass	23.9	0.245		
0x4545	2437	20.0	98.9	3.6	Pass	23.6	0.226		
0x47xx	2462	19.8	95.5	3.6	Pass	23.4	0.219		

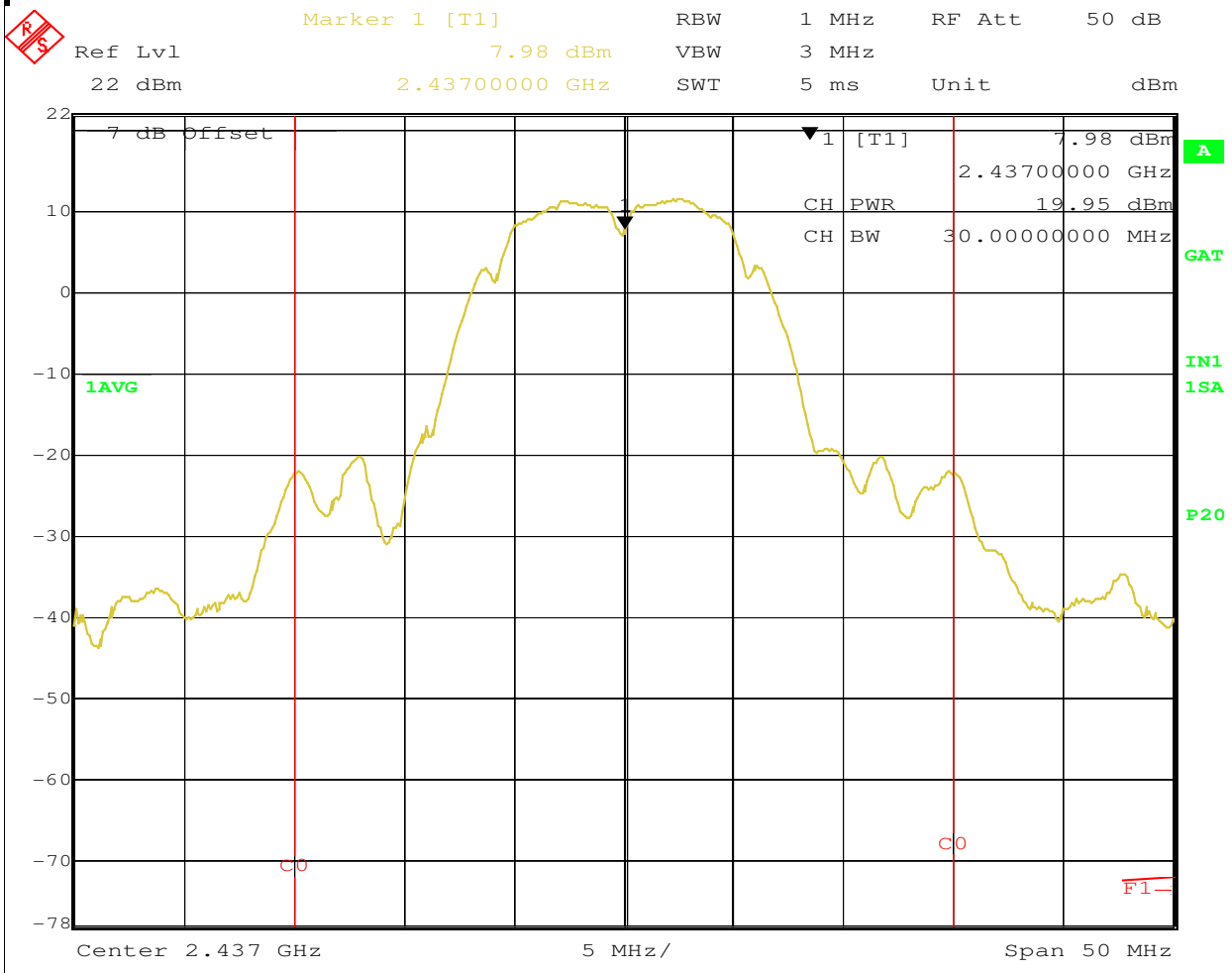
Note 1:	RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was not continuous but the ESI analyzer was configured with a gated sweep such that the analyzer was only sweeping when the device was transmitting) and power integration over 30 MHz The output power limit is 30dBm
Note 2:	Power setting - the software power setting used during testing, included for reference only.

Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

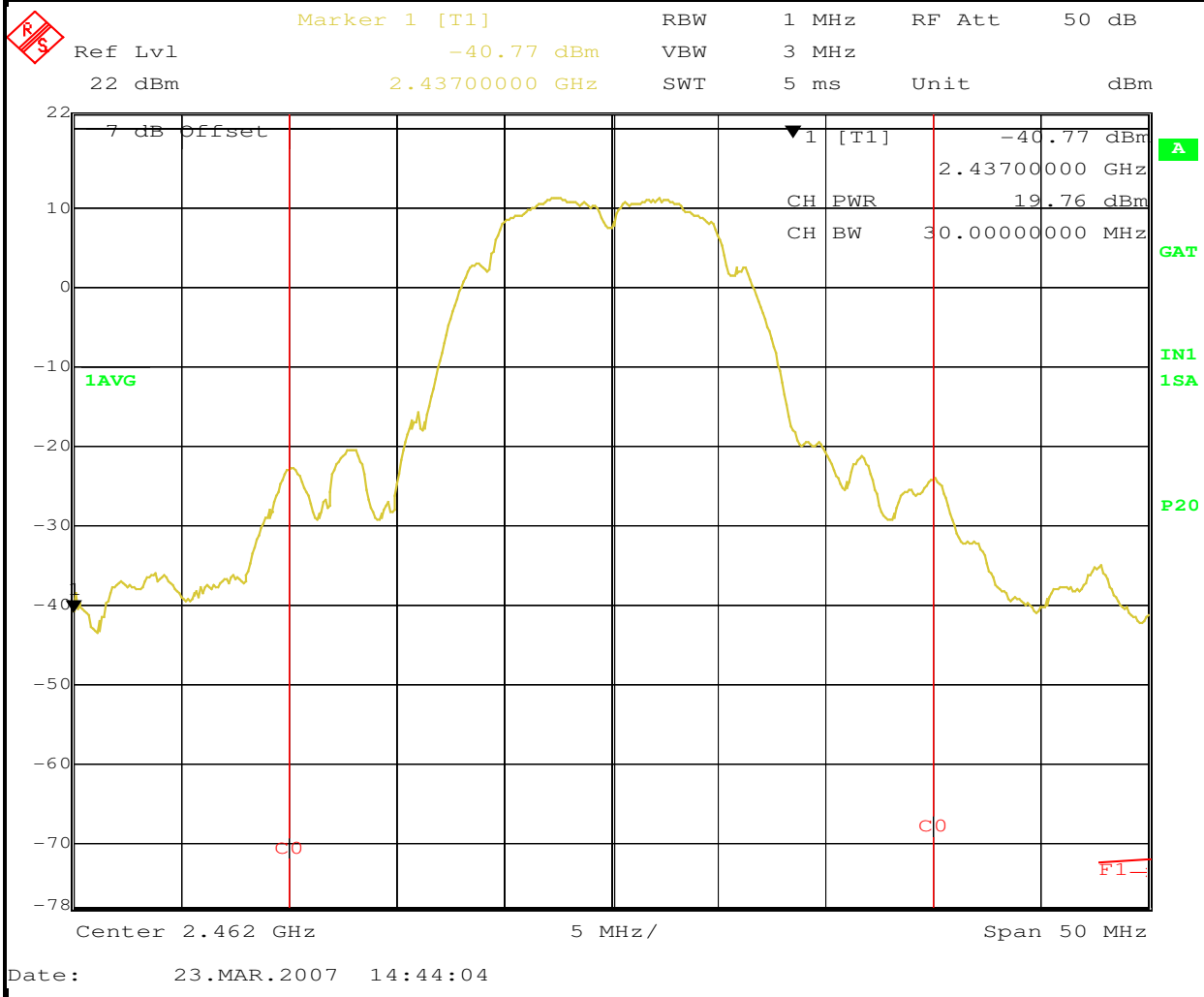


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

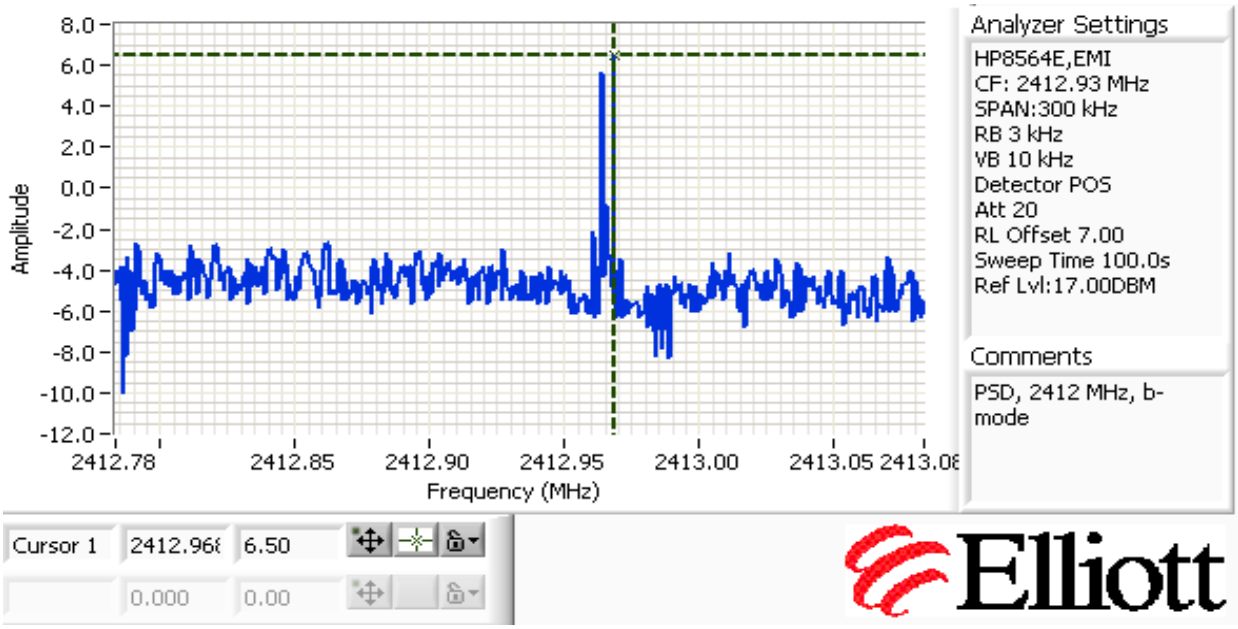


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

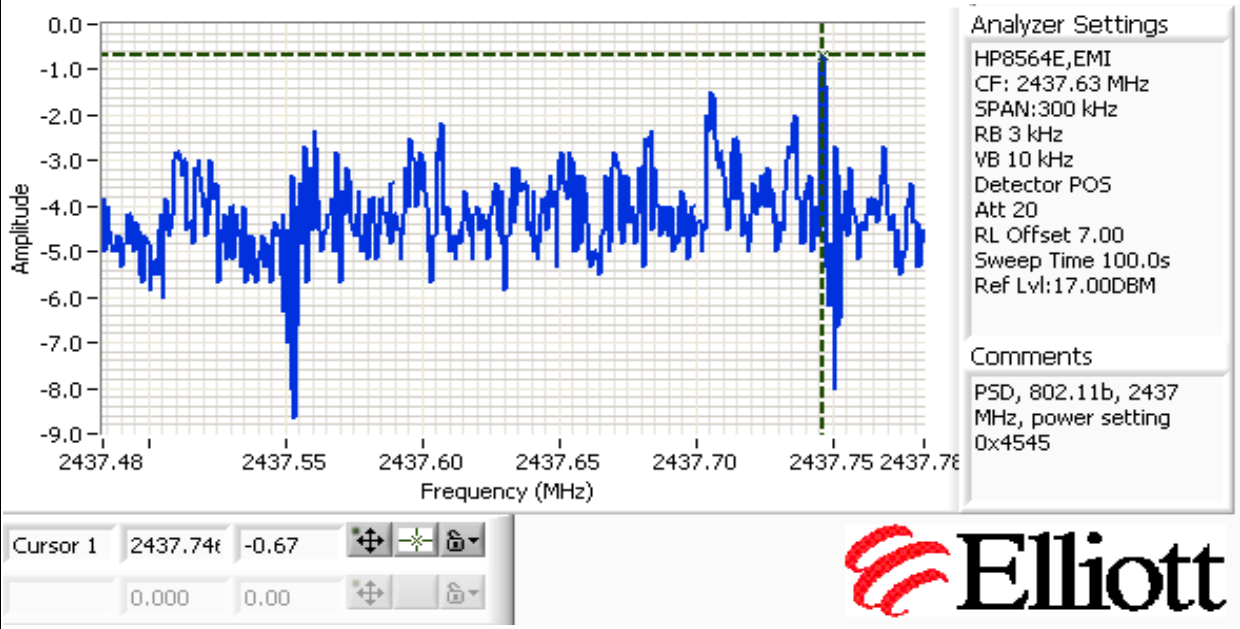
Run #2: Power spectral Density

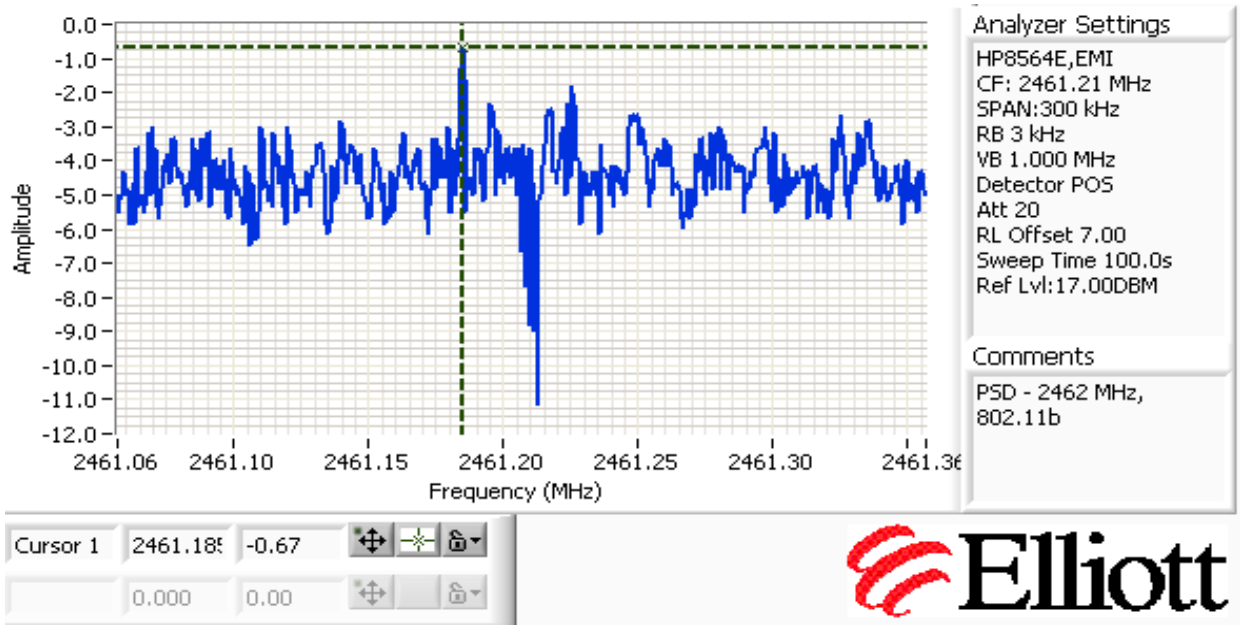
Power Setting	Frequency (MHz)	PSD (dBm/3kHz) Note 1	Limit dBm/3kHz	Result
0x40xx	2412	6.5	8.0	Pass
0x4545	2437	-0.7	8.0	Pass
0x47xx	2462	-0.7	8.0	Pass

Note 1:	Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



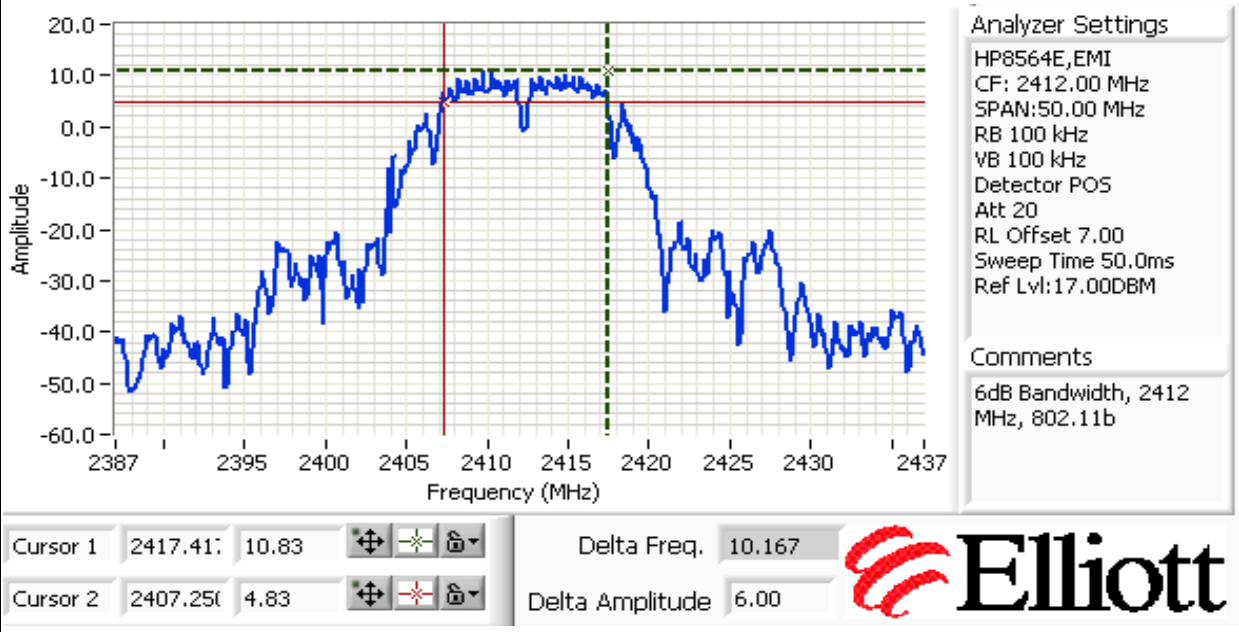


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

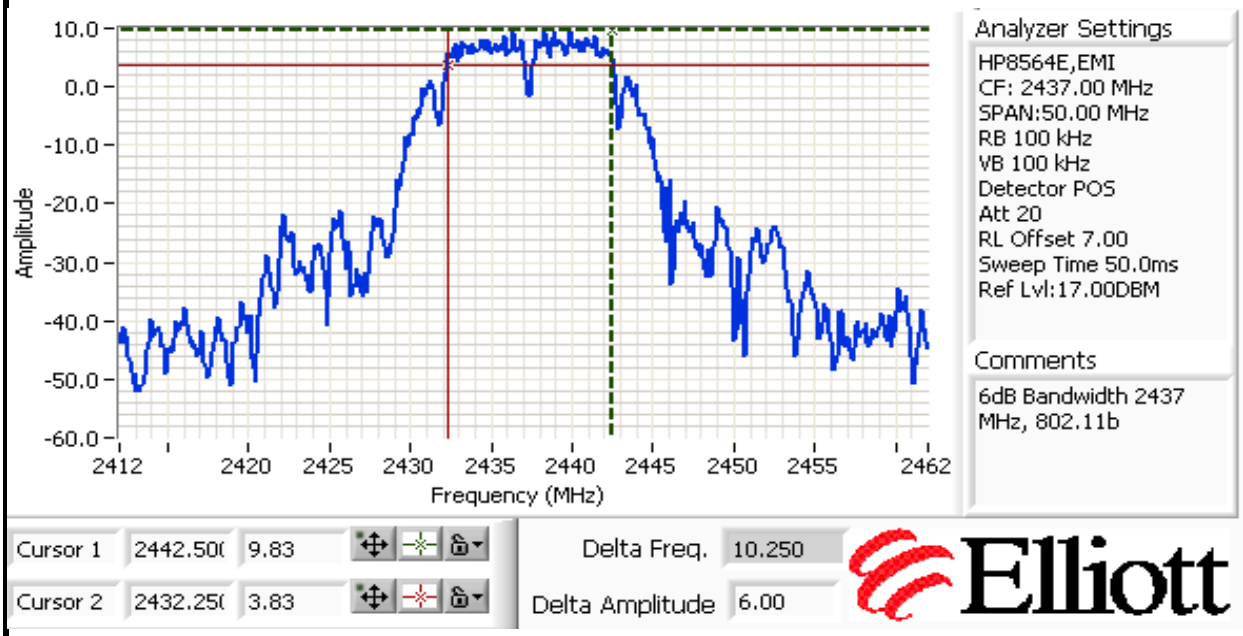
Run #3: Signal Bandwidth

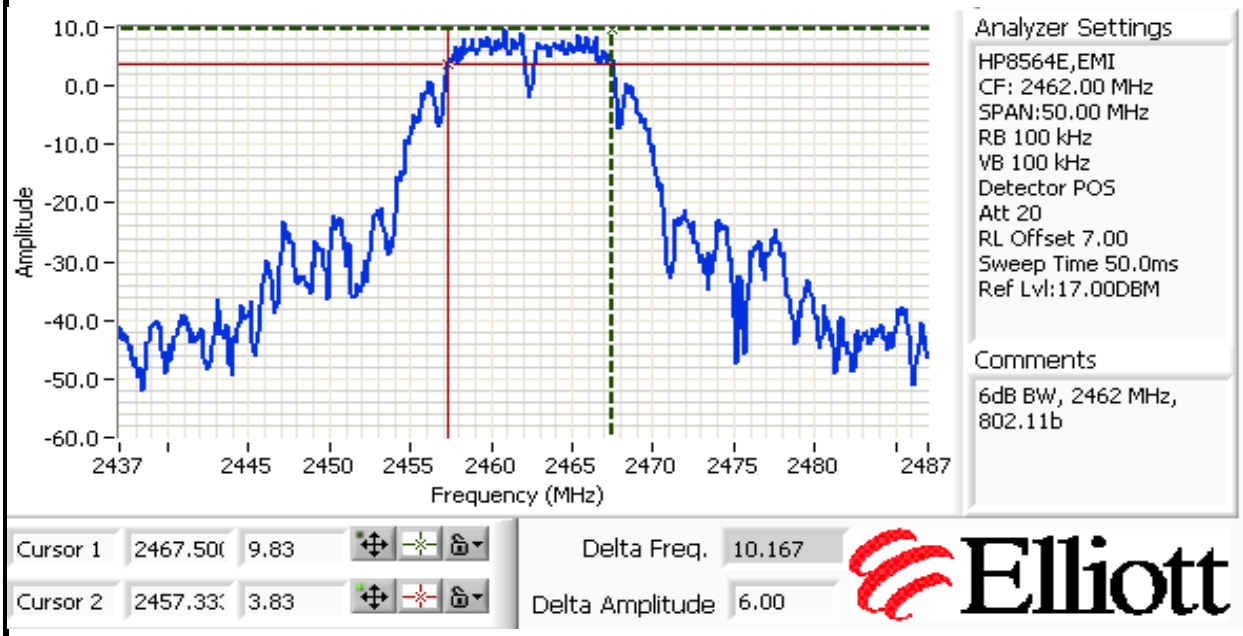
Power Setting	Frequency (MHz)	Resolution Bandwidth	Bandwidth (MHz) 6dB	99%
0x40xx	2412	100kHz	10.2	13.7
0x45xx	2437	100kHz	10.25	13.6
0x47xx	2462	100kHz	10.2	13.6

Note 1:	99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB

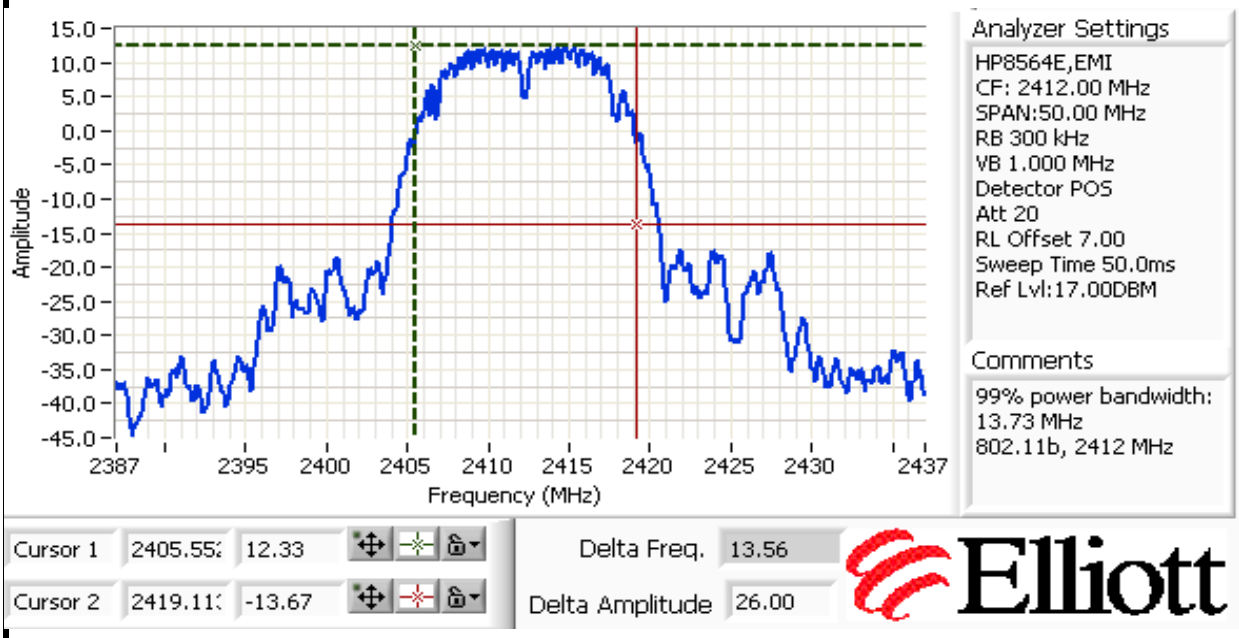


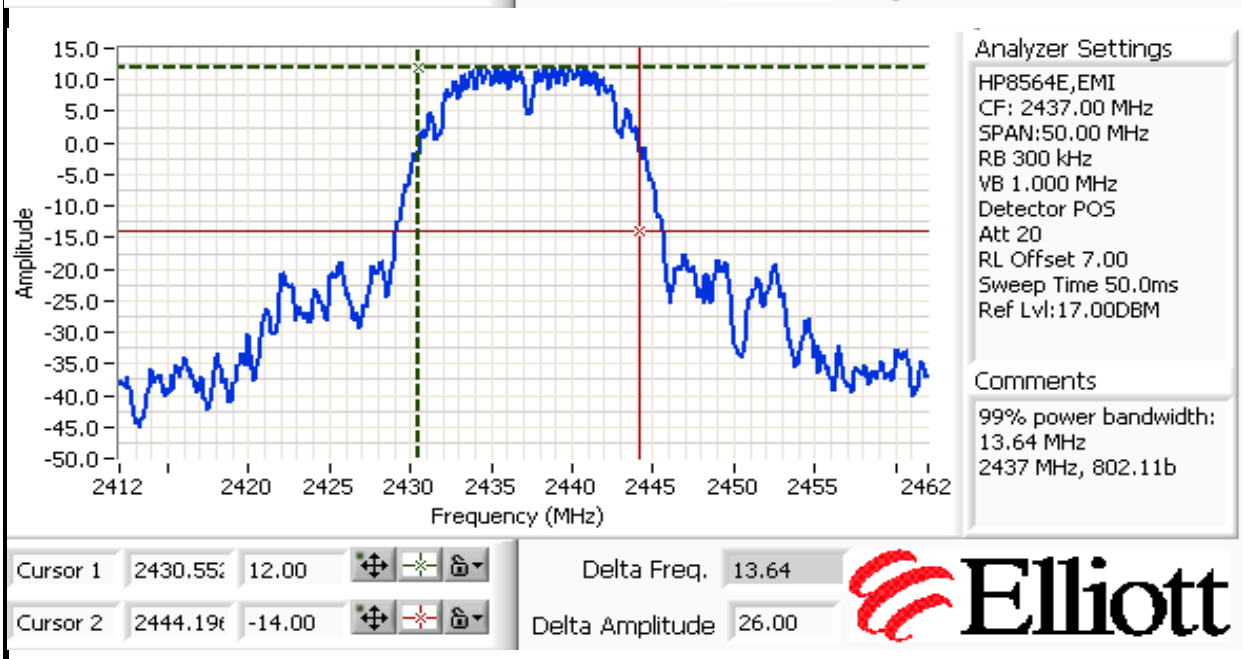
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



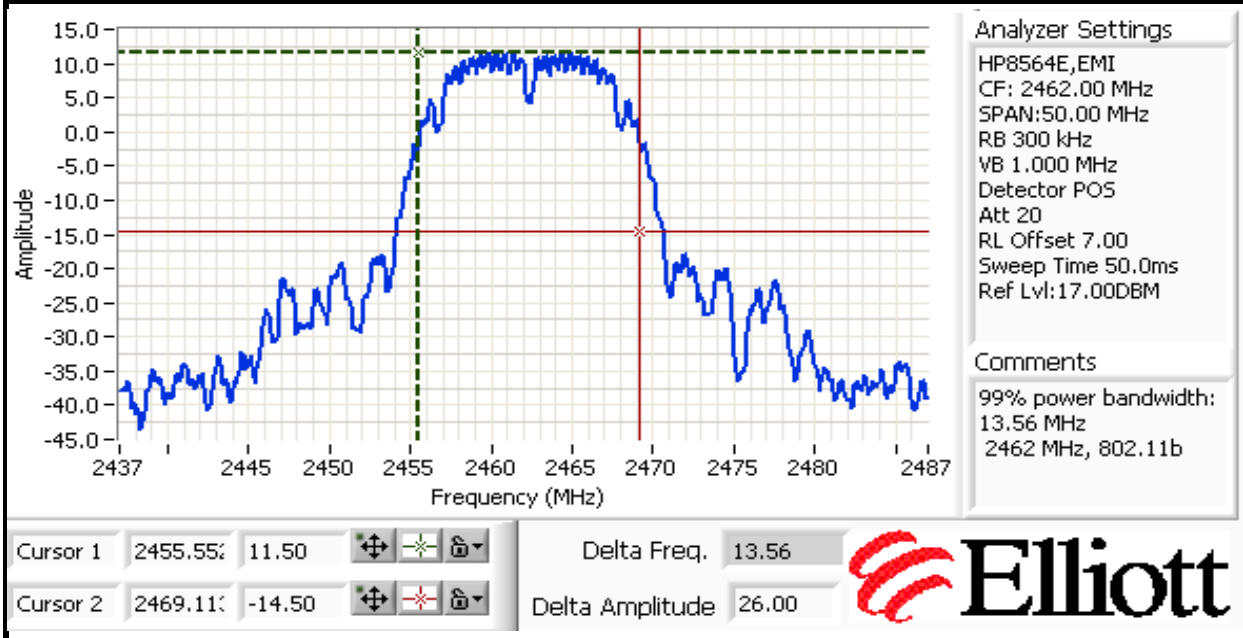


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A





Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

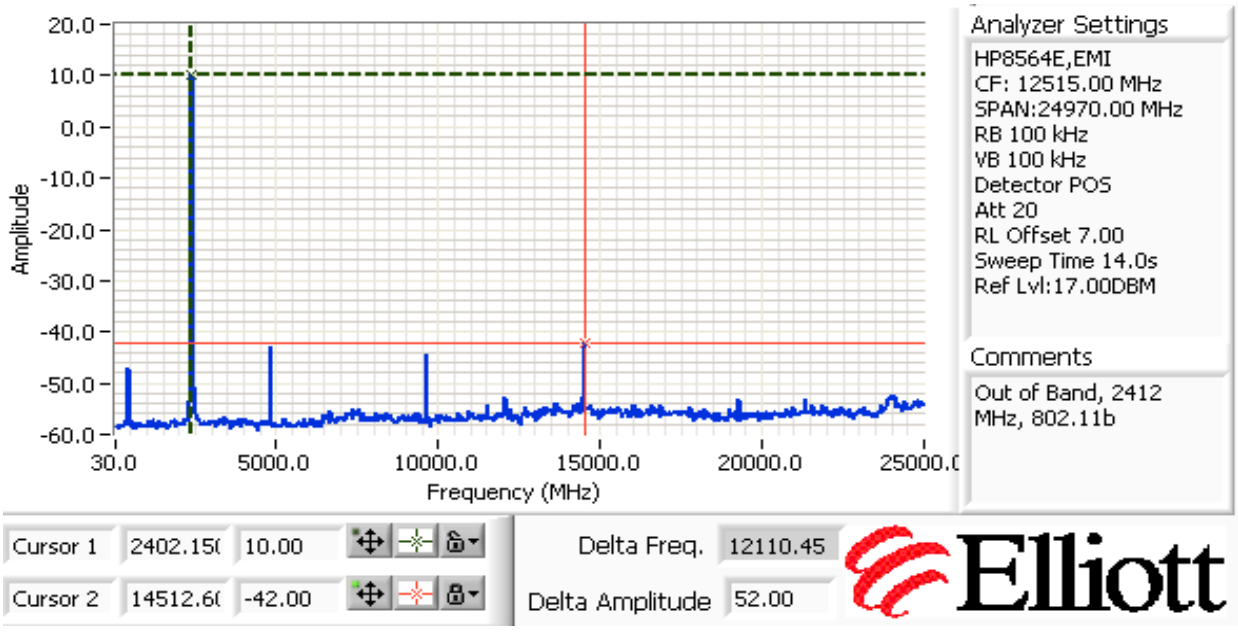


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #4: Out of Band Spurious Emissions

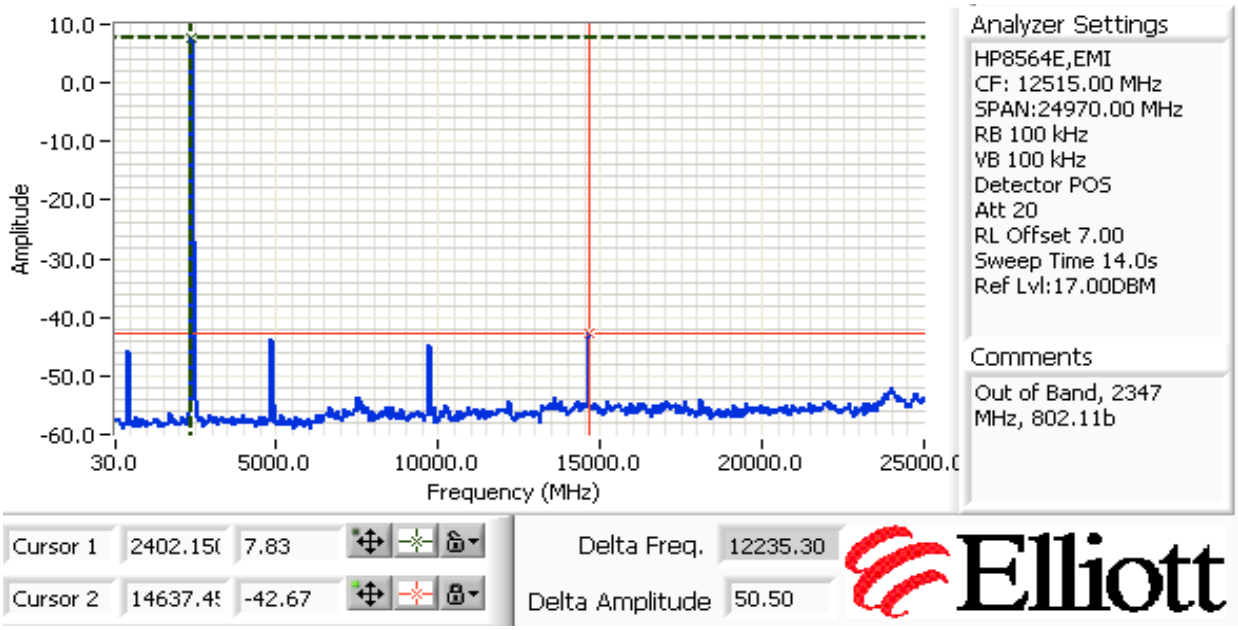
Frequency (MHz)	Limit	Result
2412	-30dBc	-52 dBc @ 14.512 GHz
2437	-30dBc	-42.7 dBc @ 14.637 GHz
2462	-30dBc	-42.7 dBc @ 9.851 GHz

Plots for low channel, power setting(s) = 0x40xx

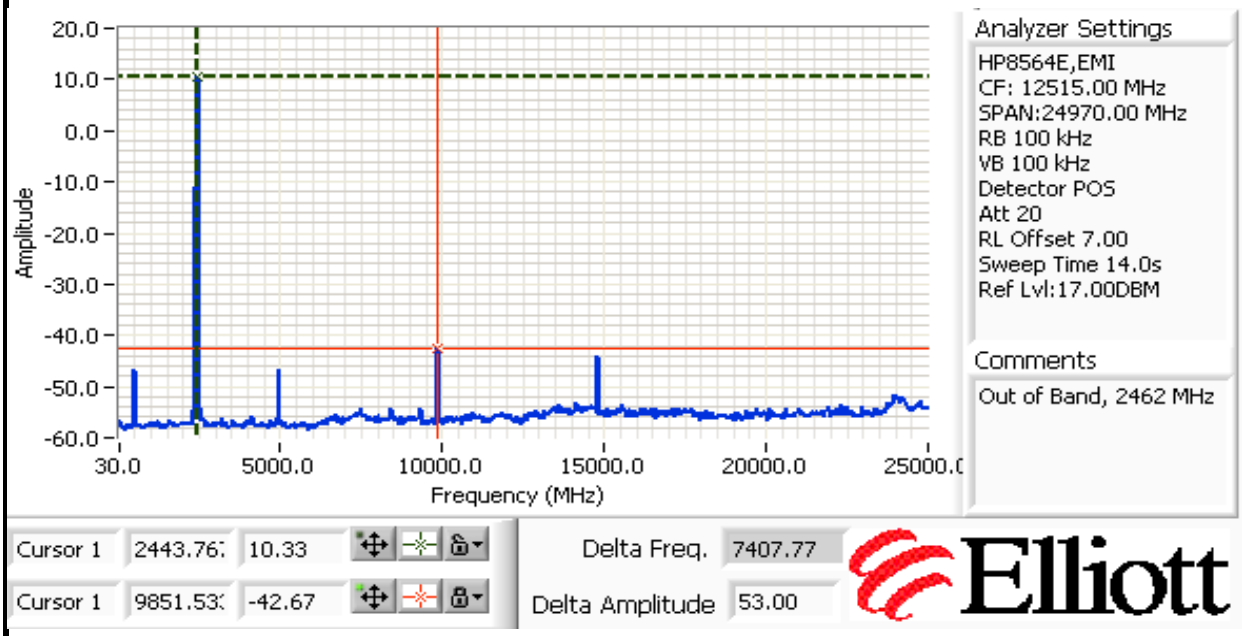


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Plots for center channel, power setting(s) = 0x45xx



Plots for high channel, power setting(s) = 0x47xx



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
Power, Bandwidth and Spurious Emissions (802.11g Legacy)

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 3/20/2007
Test Engineer: Juan Martinez
Test Location: Fremont Chamber #3

Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:

Temperature: 18 °C
Rel. Humidity: 37 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Output Power	15.247(b)	Pass	19.6 dBm
2	Power spectral Density (PSD)	15.247(d)	Pass	-0.4dBm/3kHz
3	6dB Bandwidth	15.247(a)	Pass	16.6 MHz
3	99% Bandwidth	RSS GEN	-	17.8 MHz
4	Spurious emissions	15.247(b)	Pass	Refer to plots

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

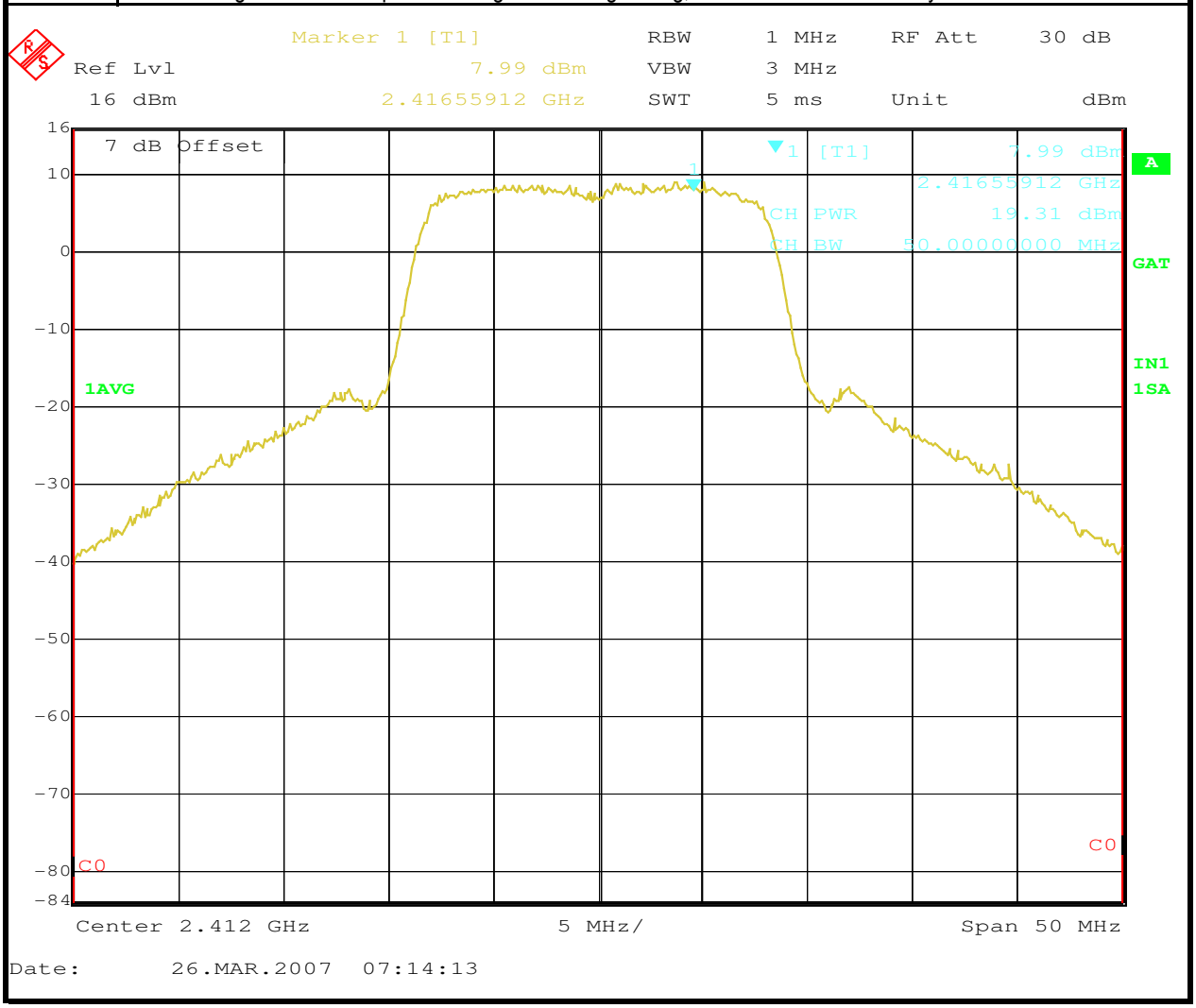
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1: Output Power

ESIB Power measurement table

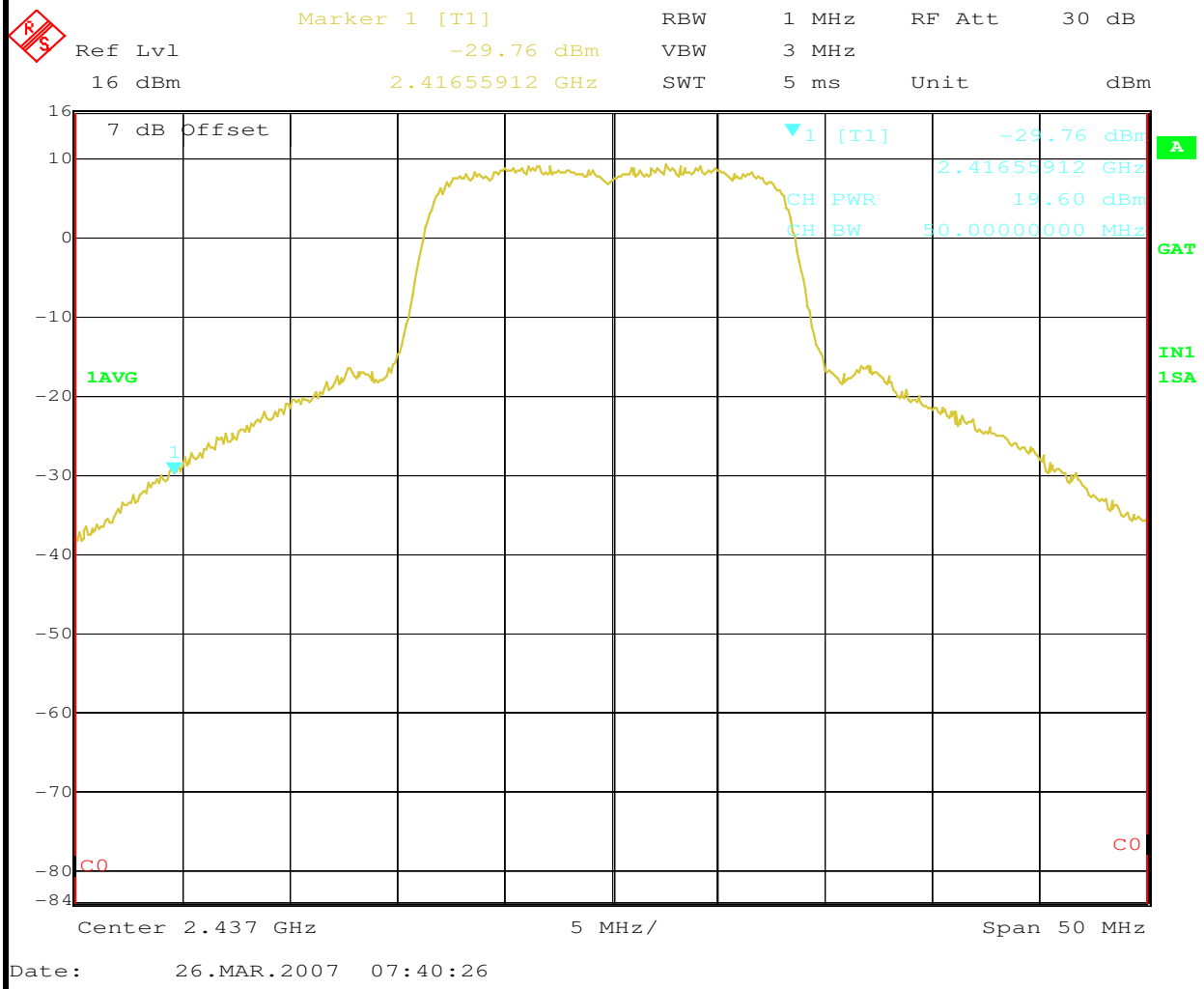
Power Setting[2]	Frequency (MHz)	Output Power (dBm)[1]	Output Power mW	Antenna Gain (dBi)	Result	EIRP[Note 2] dBm	EIRP[Note 2] W	Output Power (dBm)[3]	Output Power mW
0x3Axx	2412	19.3	85.1	3.6	Pass	22.9	0.195		
0x3Cxx	2437	19.6	91.2	3.6	Pass	23.2	0.209		
0x44xx	2462	18.6	72.4	3.6	Pass	22.2	0.166		

Note 1:	RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was not continuous but the ESI analyzer was configured with a gated sweep such that the analyzer was only sweeping when the device was transmitting) and power integration over 50 MHz
Note 2:	Power setting - the software power setting used during testing, included for reference only.

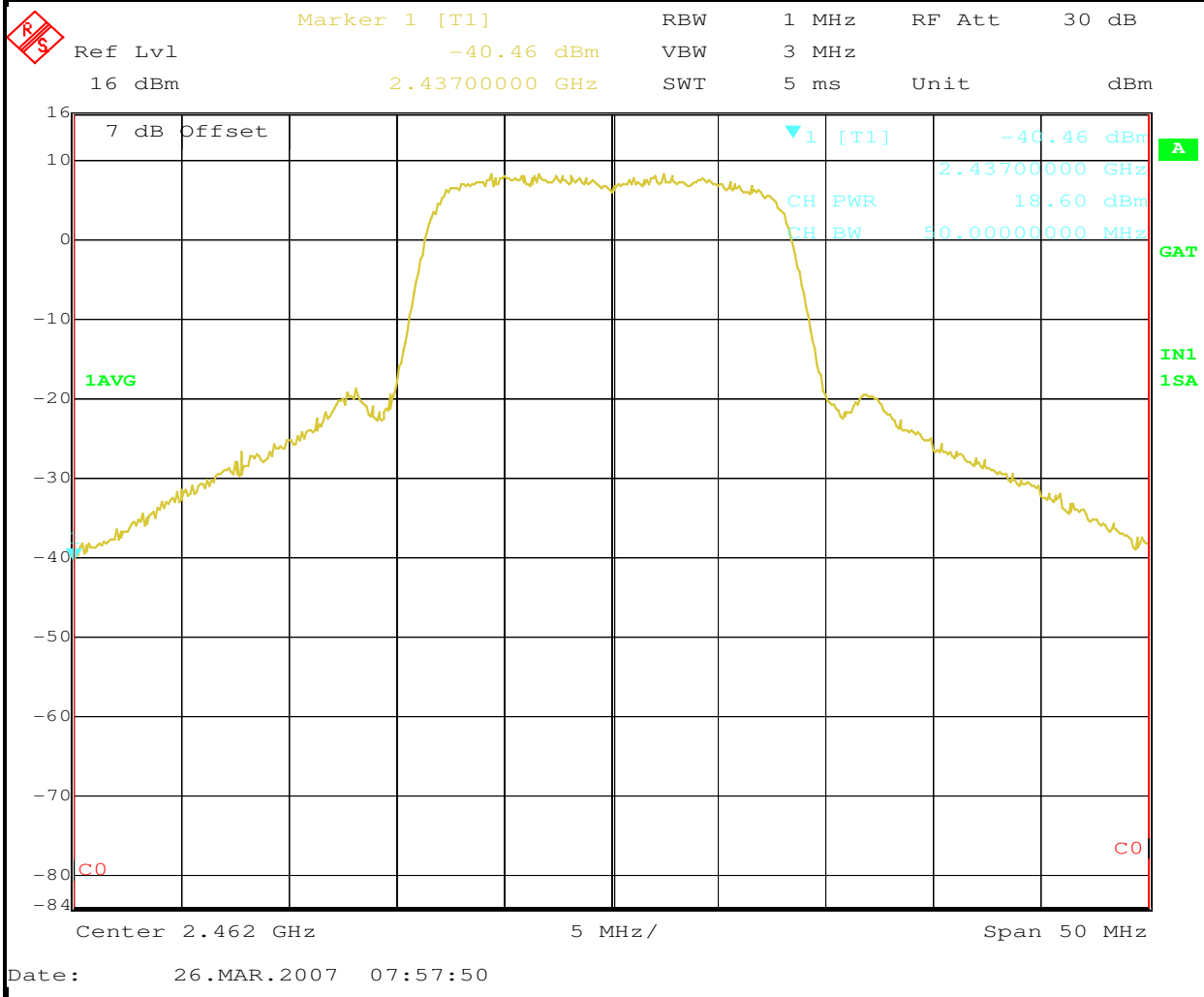


EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

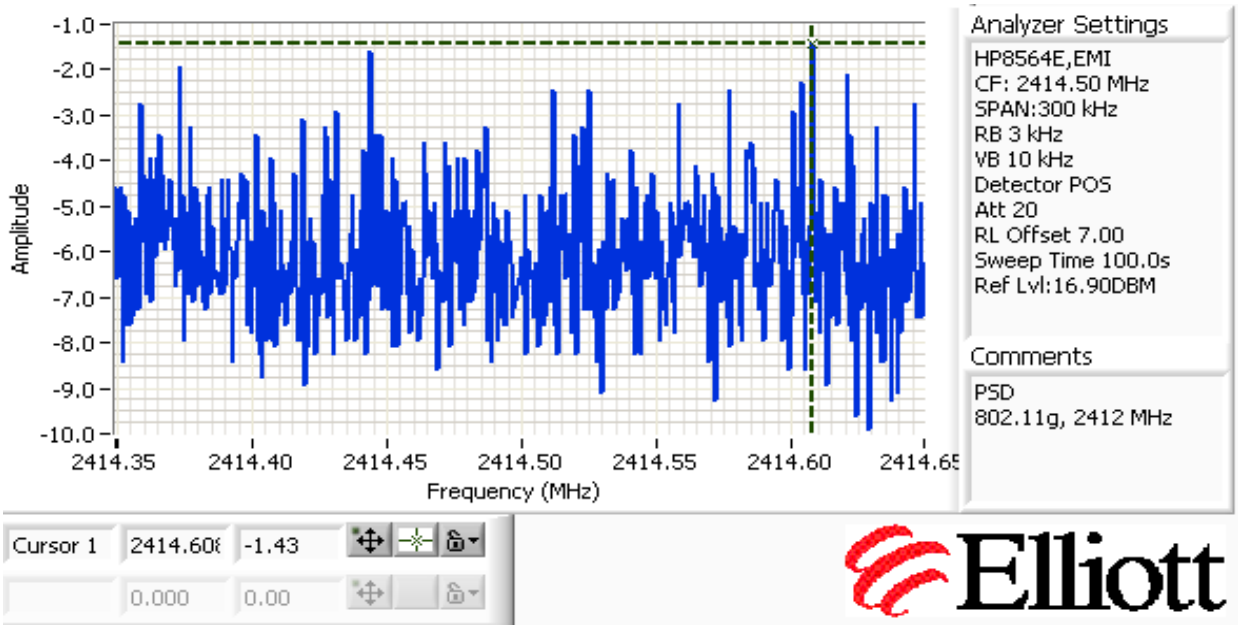


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

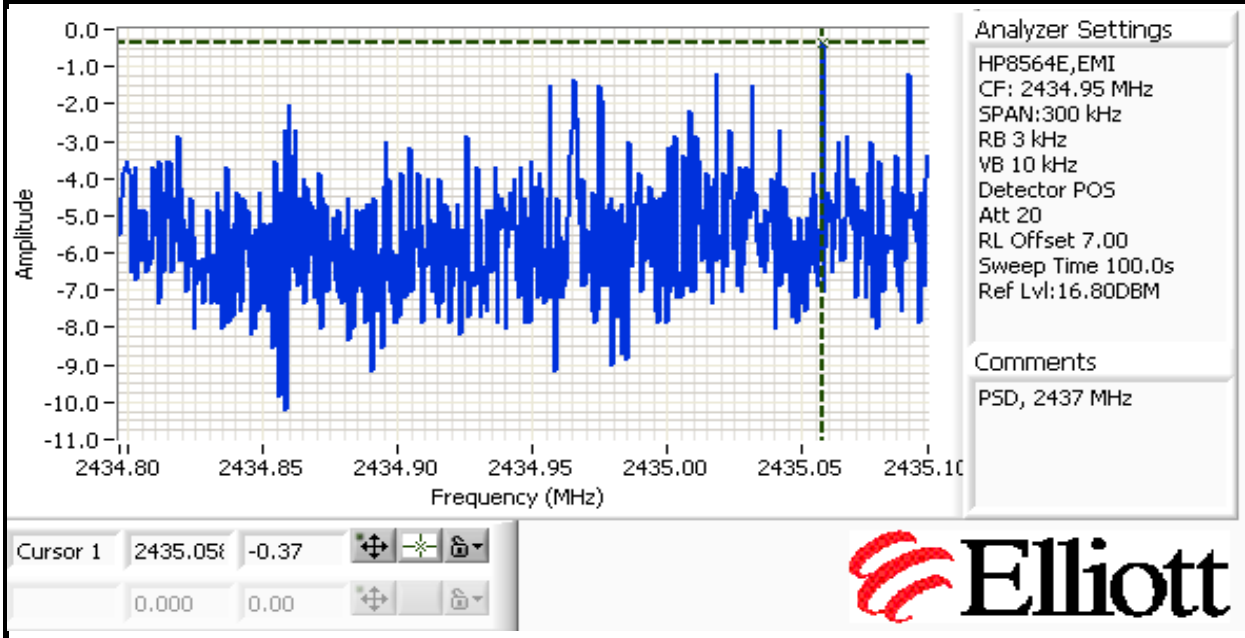
Run #2: Power spectral Density

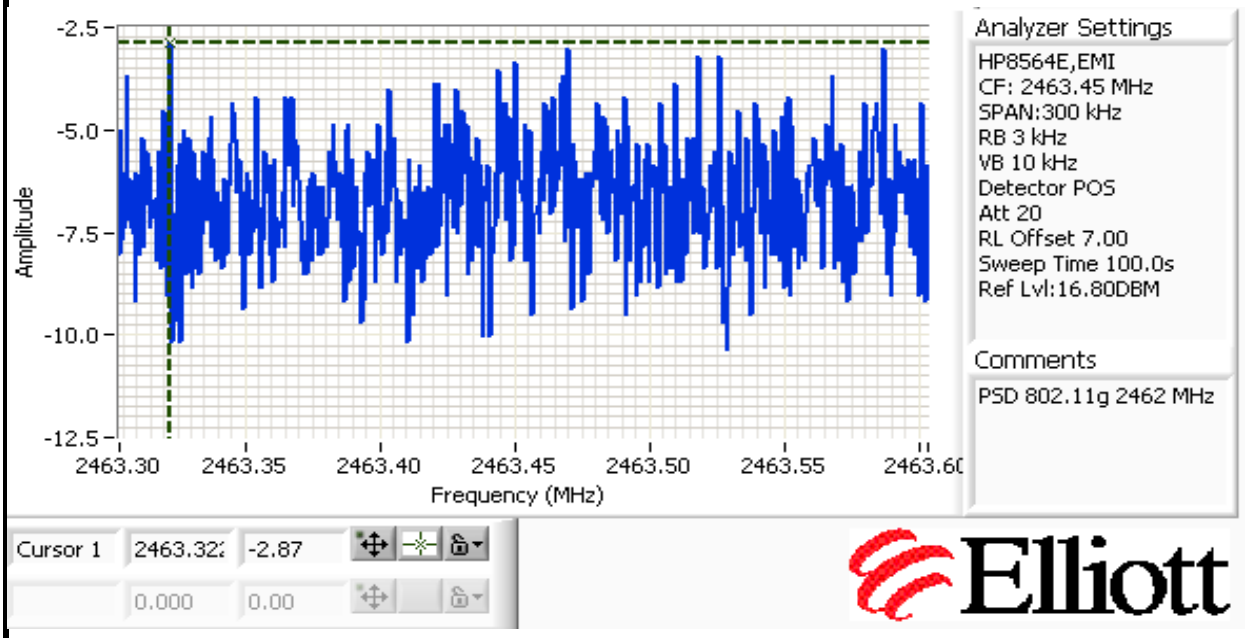
Power Setting	Frequency (MHz)	PSD (dBm/3kHz) Note 1	Limit dBm/3kHz	Result
0x3Axx	2412	-1.4	8.0	Pass
0X3Cxx	2437	-0.4	8.0	Pass
0x44xx	2462	-2.9	8.0	Pass

Note 1:	Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



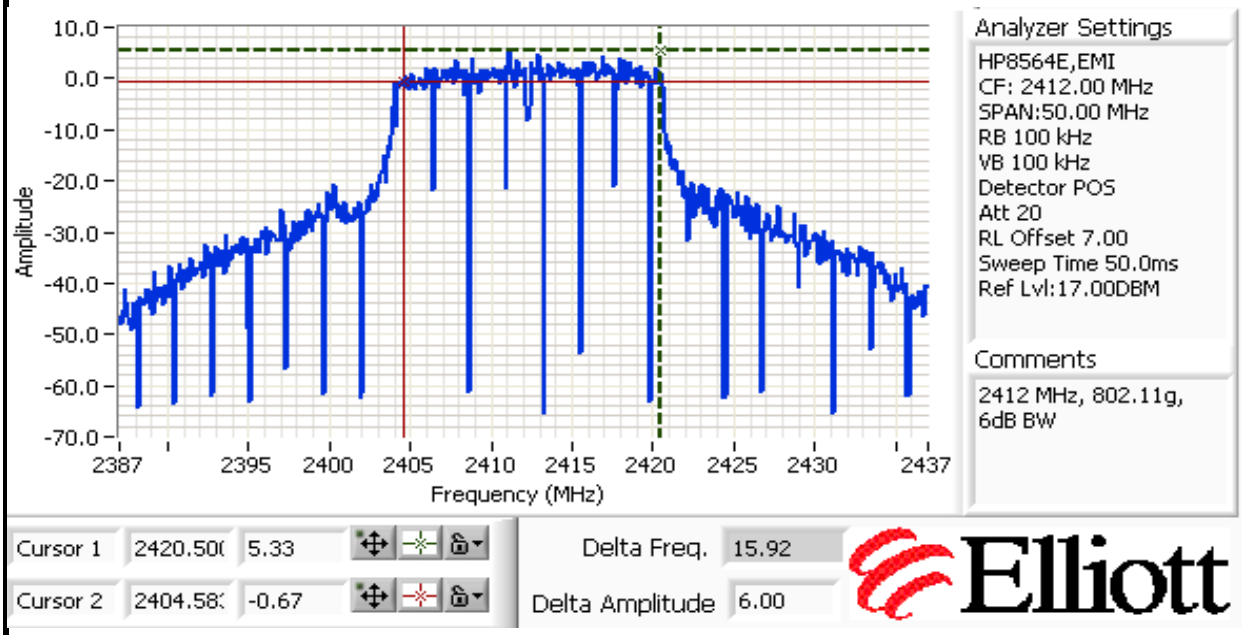


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

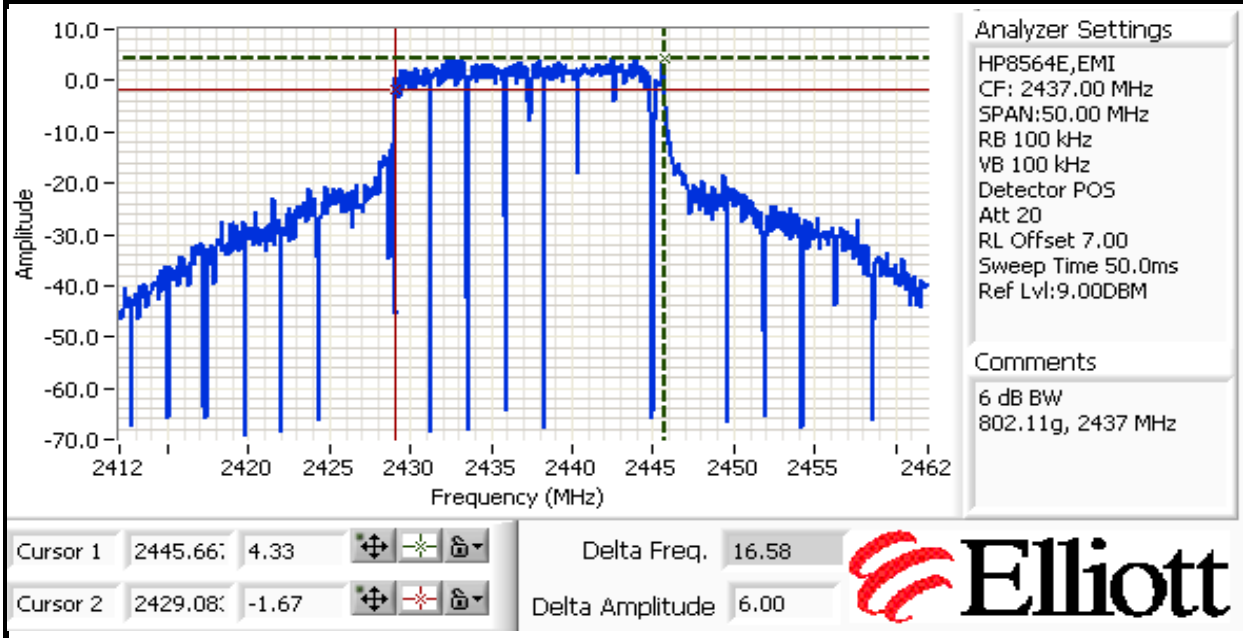
Run #3: Signal Bandwidth

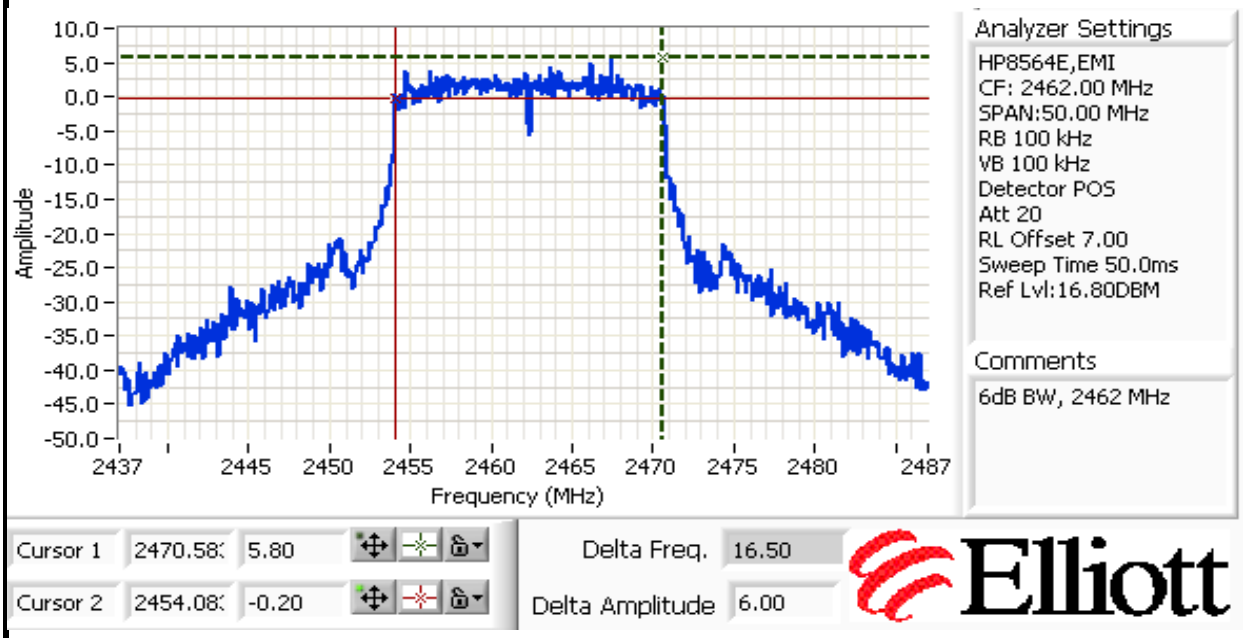
Power Setting	Frequency (MHz)	Resolution Bandwidth	Bandwidth (MHz) 6dB	99%
0x3a00	2412	100kHz	15.9	17.6
0x3Cxx	2437	100kHz	16.6	17.1
0x44xx	2462	100kHz	16.5	17.8

Note 1:	99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB

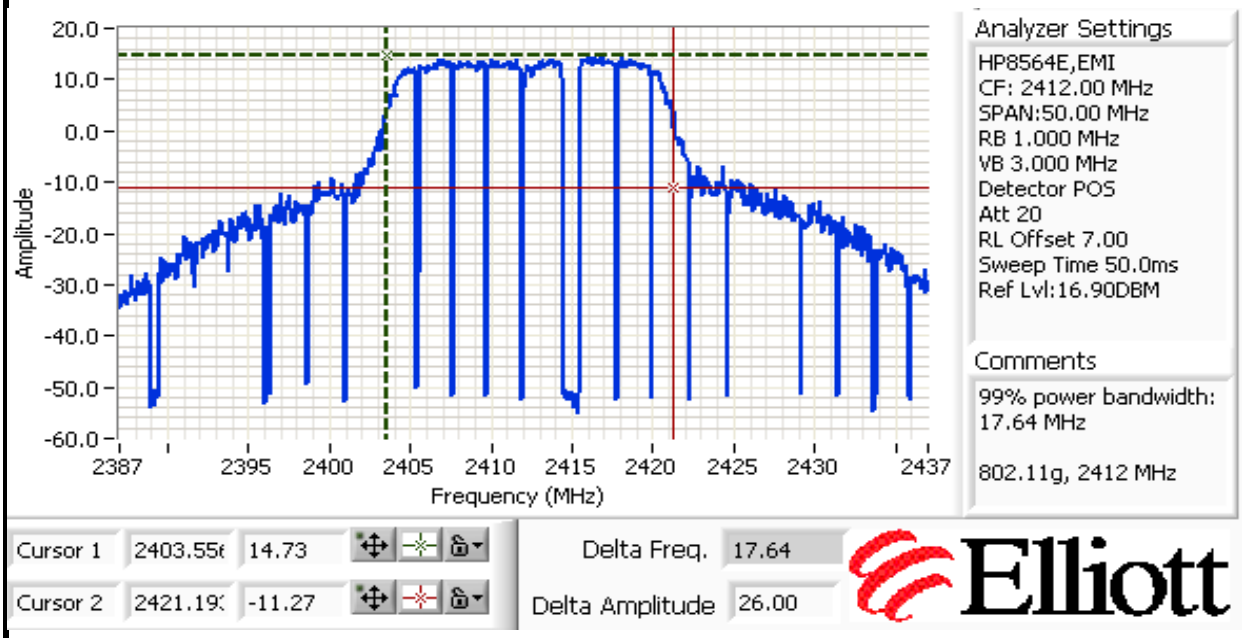


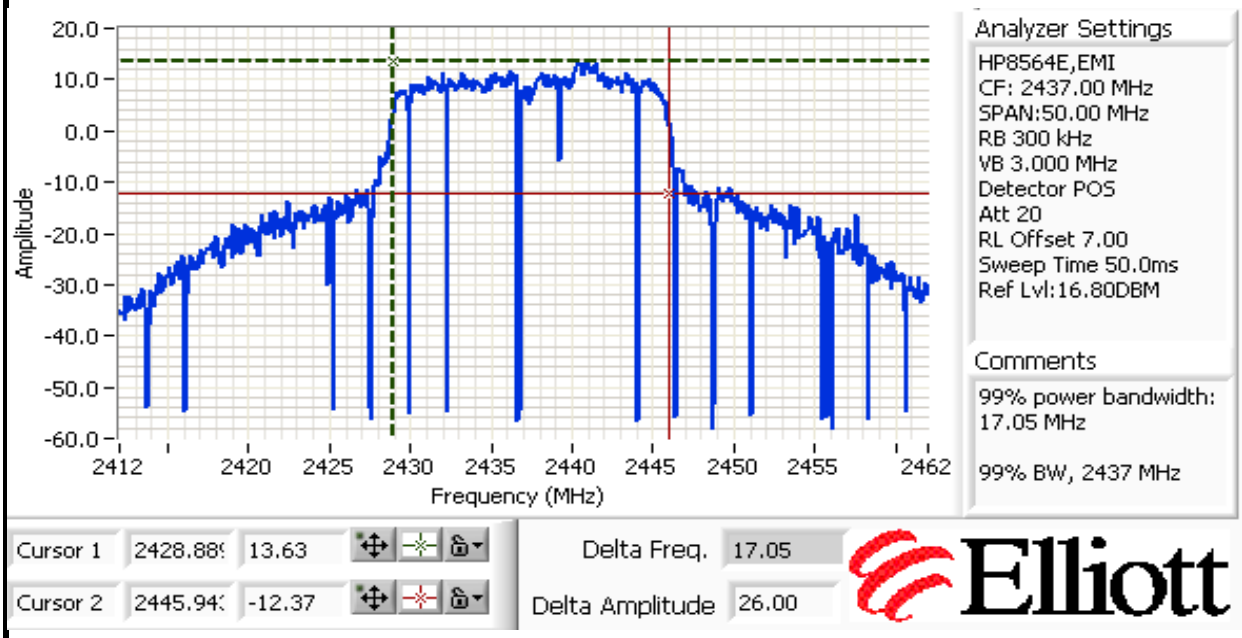
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



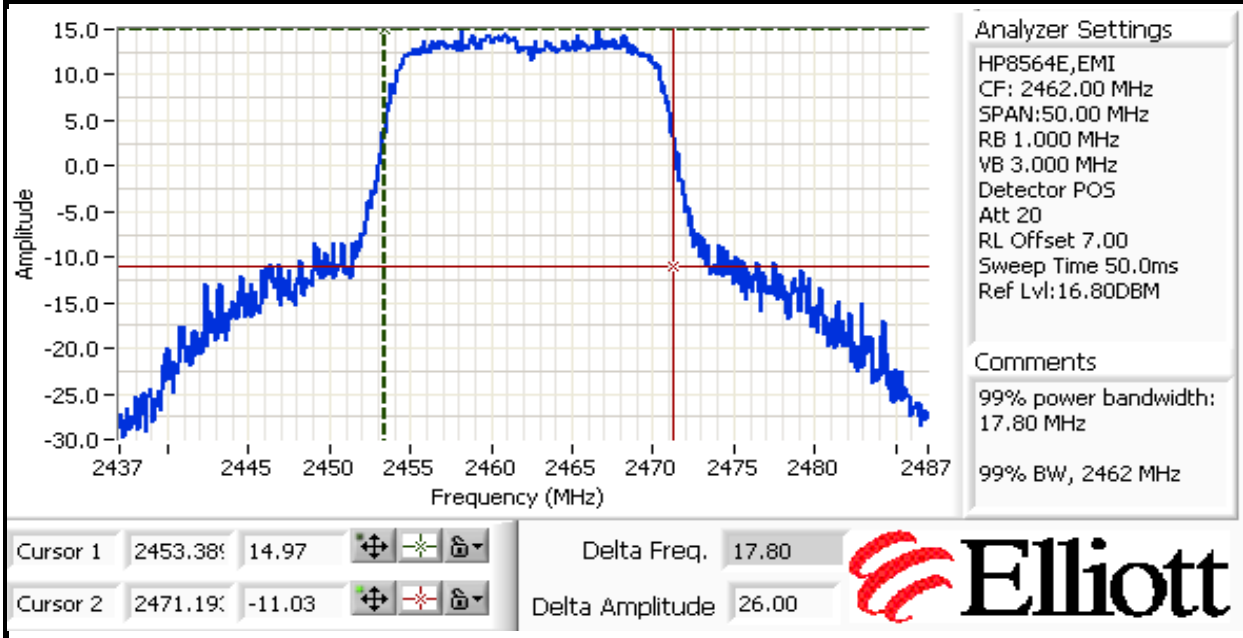


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A





Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

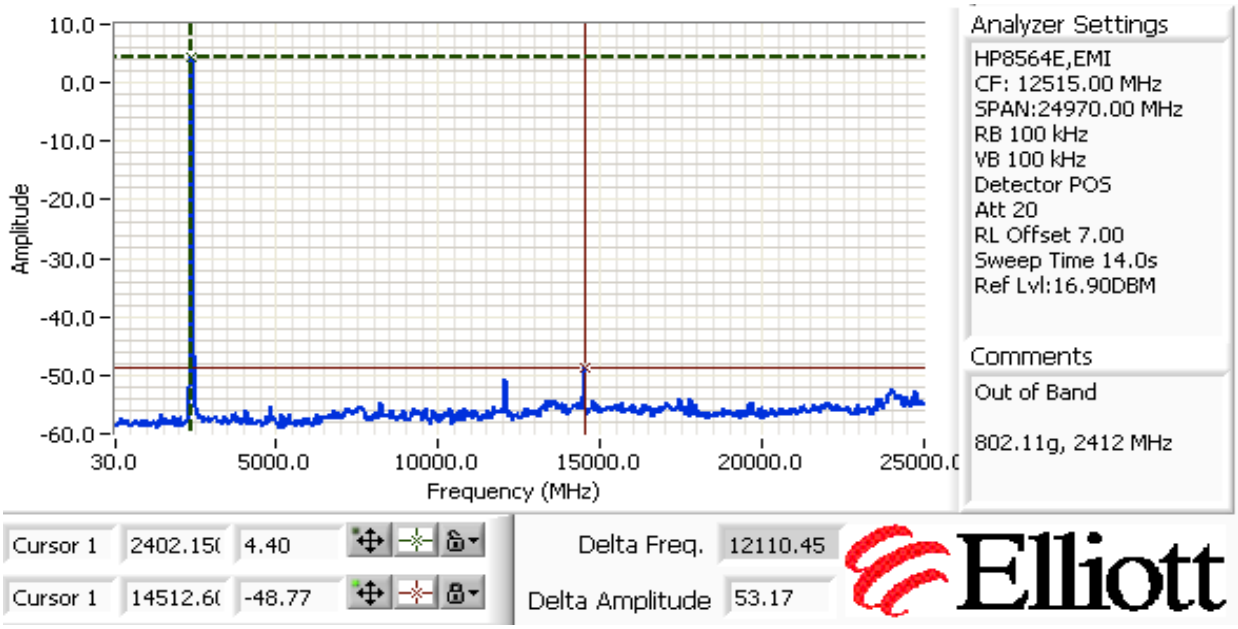


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #4: Out of Band Spurious Emissions

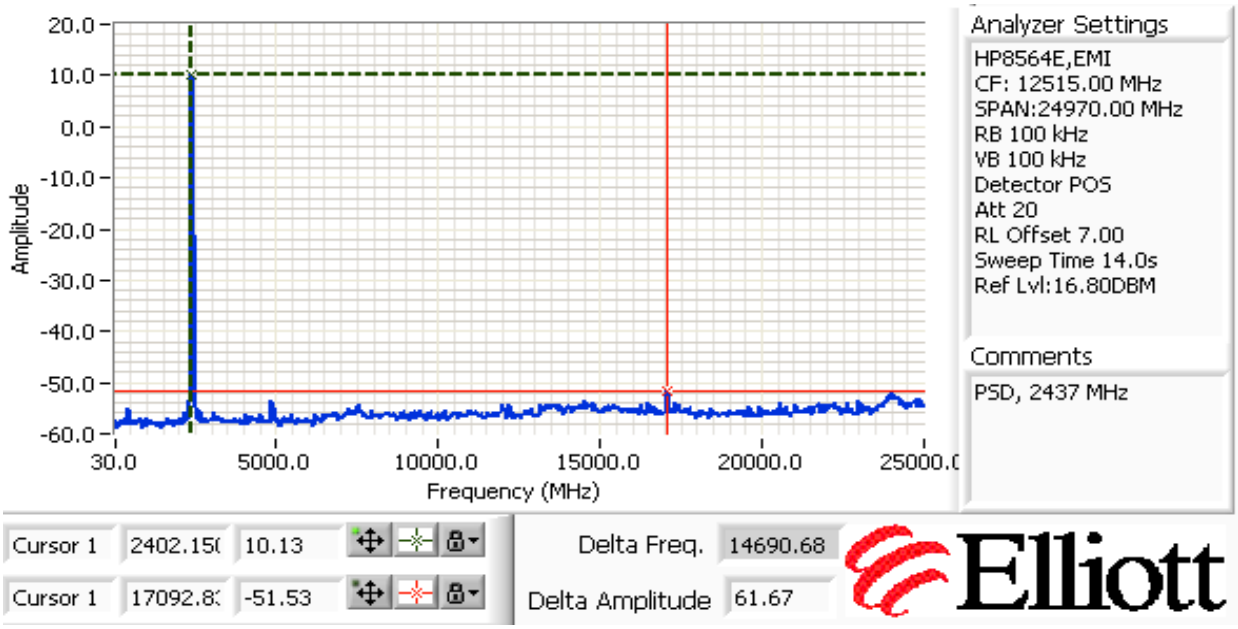
Frequency (MHz)	Limit	Result
2412	-30dBc	-53.2 dBc @ 14.512 GHz
2437	-30dBc	-61.7dBc @ 14.690 GHz
2462	-30dBc	-56.8 dBc @ 21.599 GHz

Plots for low channel, power setting(s) = 0x3Axx

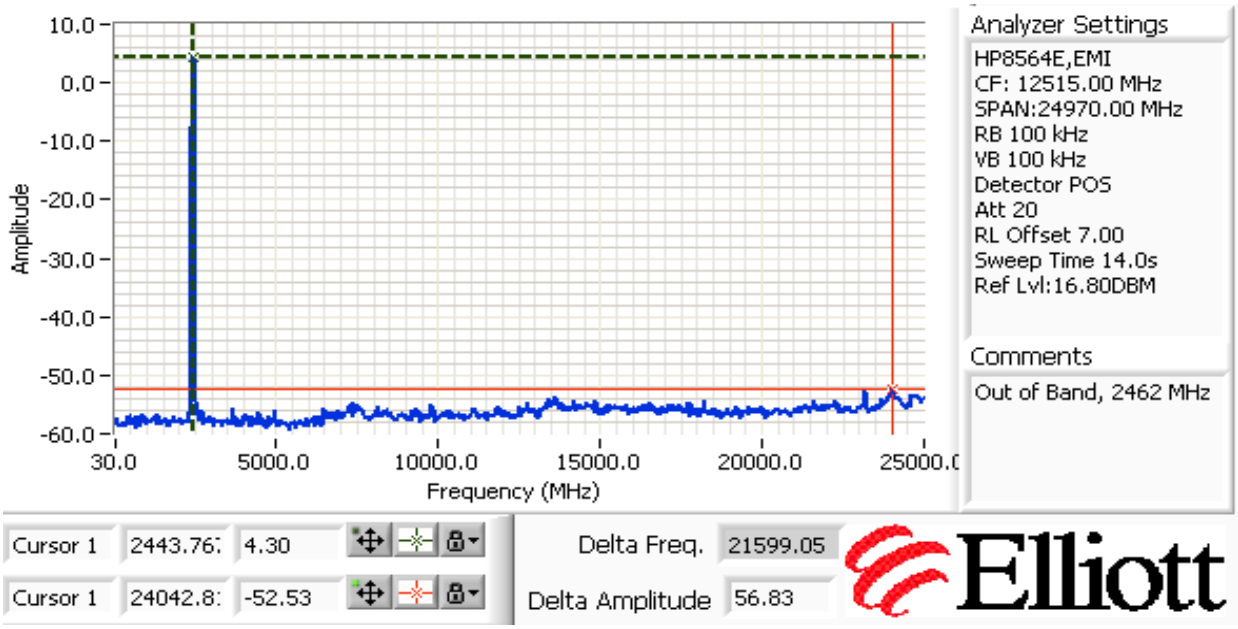


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Plots for center channel, power setting(s) = 0x3Cxx



Plots for high channel, power setting(s) = 0x44xx



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements

Power, Bandwidth and Spurious Emissions, (SISO 40 MHz, 2.4GHz)

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 3/20/2007
Test Engineer: Juan Martinez
Test Location: Fremont Chamber #3

Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:

Temperature: 18 °C
Rel. Humidity: 37 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Output Power	15.247(b)	Pass	18.9 dBm
2	Power spectral Density (PSD)	15.247(d)	Pass	4.1 dBm/3kHz
3	6dB Bandwidth	15.247(a)	Pass	36.8 MHz
3	99% Bandwidth	RSS GEN	-	36.9 MHz
4	Spurious emissions	15.247(b)	Pass	Refer to plots

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

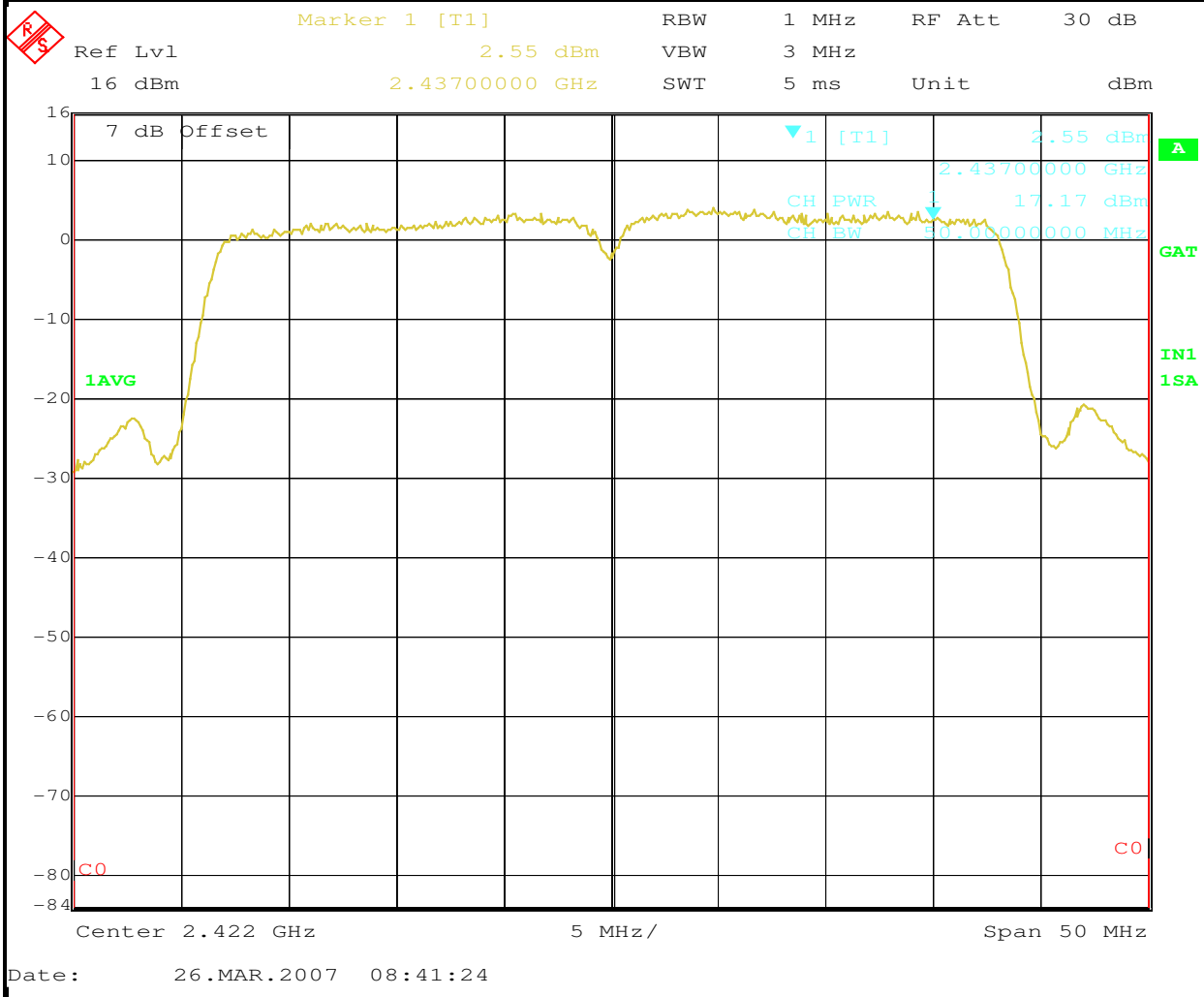
Run #1: Output Power

ESI Power Measurements

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x43xx	2422	17.2		17.2	3.6			20.8	0.120
0x3dxx	2437	18.9		18.9	3.6			22.5	0.179
0x47xx	2452	17.0		17.0	3.6			20.6	0.116

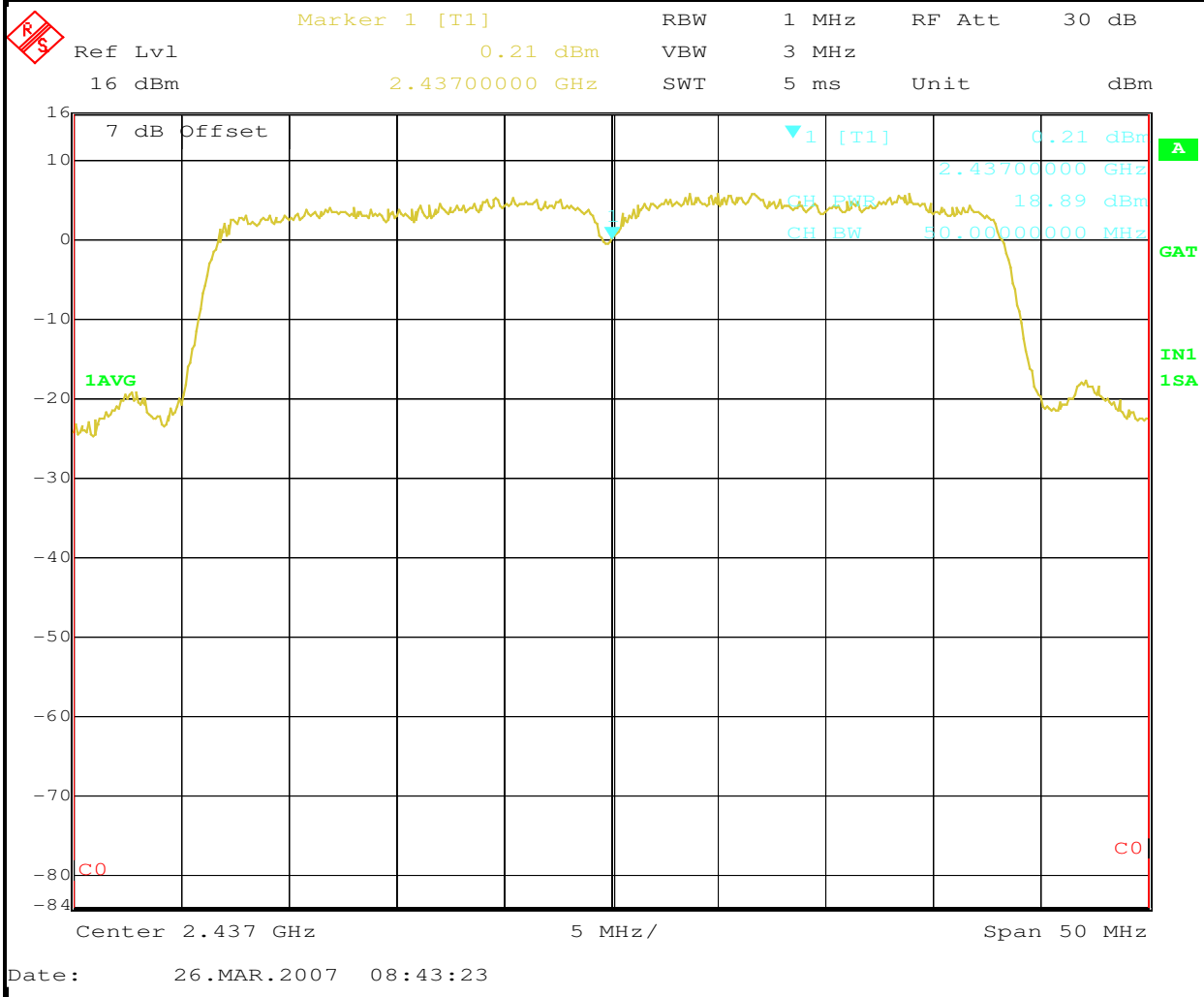
Note 1:	RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was not continuous but the ESI analyzer was configured with a gated sweep such that the analyzer was only sweeping when the device was transmitting) and power integration over 50 MHz
Note 2:	Power setting - the software power setting used during testing, included for reference only.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

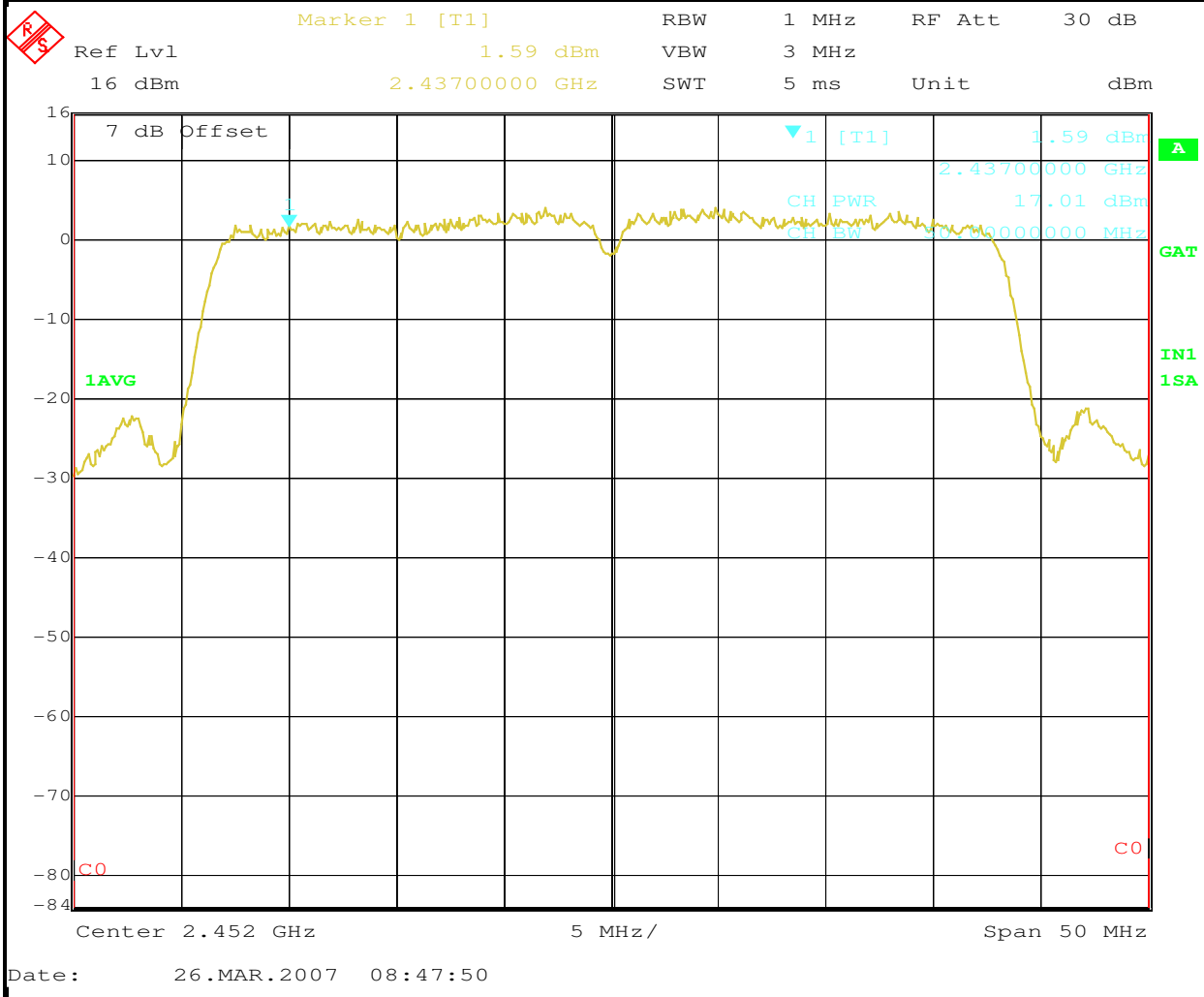


Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

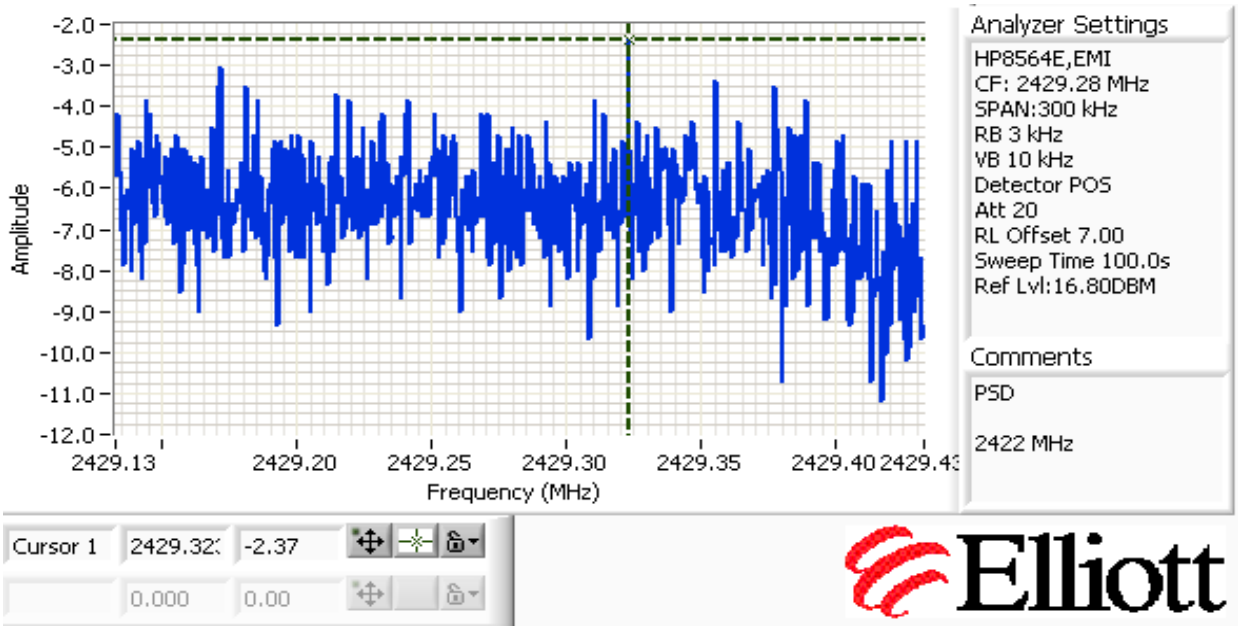


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

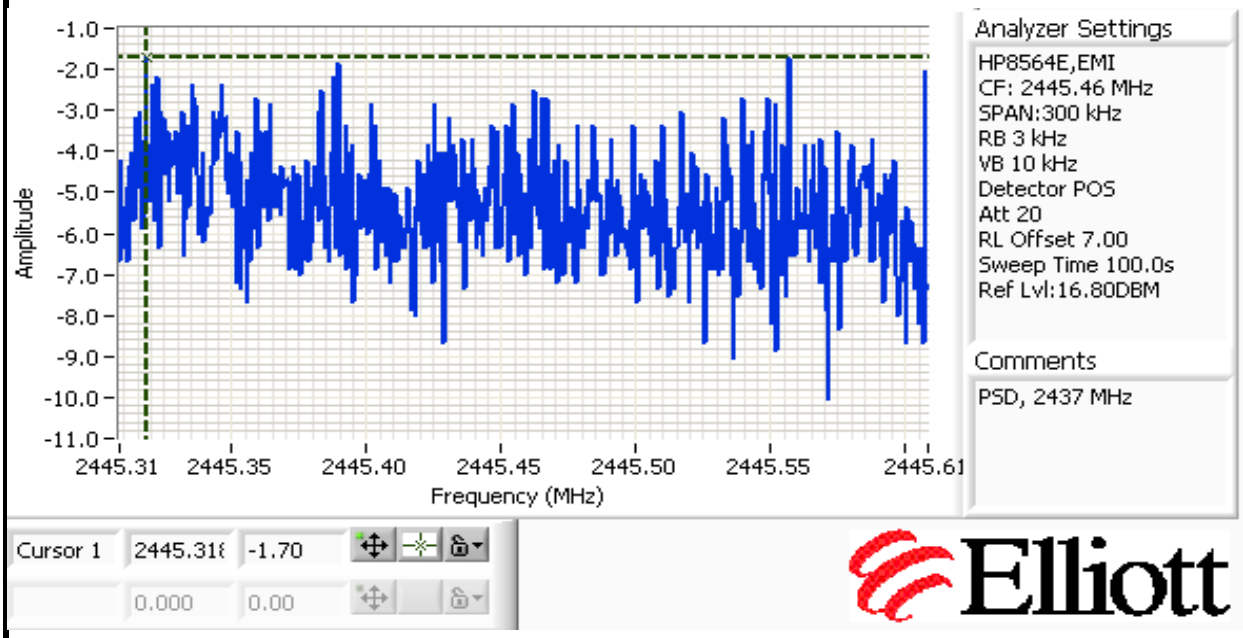
Run #2: Power spectral Density

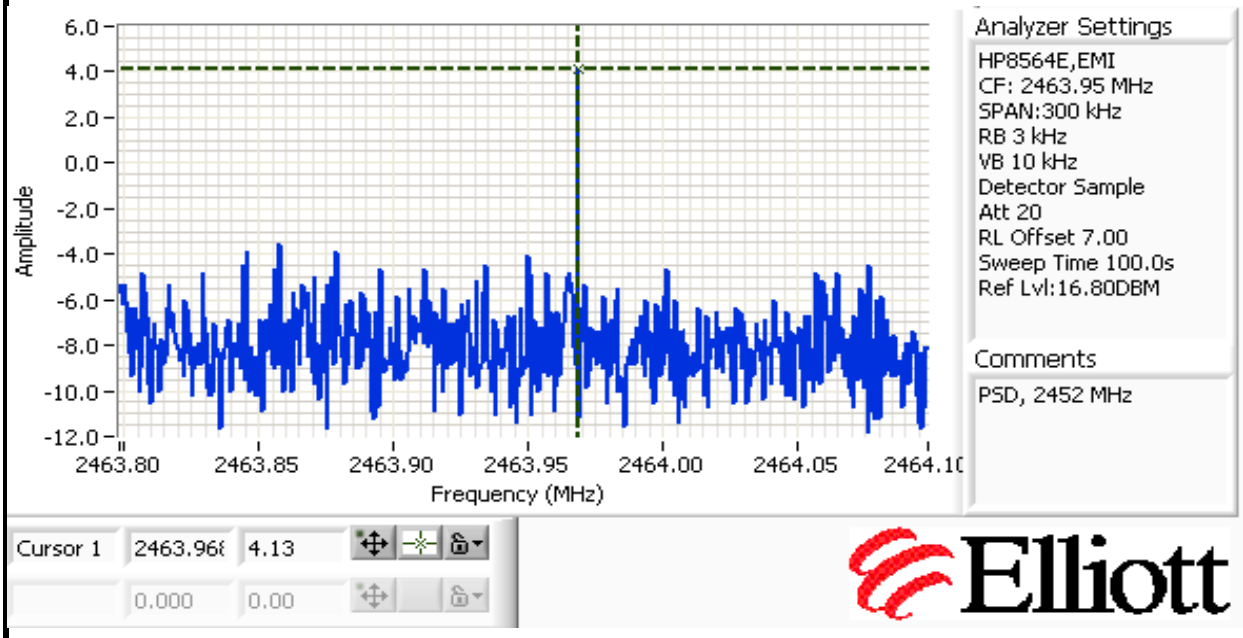
Power Setting	Frequency (MHz)	PSD (dBm/3kHz) Note 1	Limit dBm/3kHz	Result
0x43xx	2422	-2.4	8.0	Pass
0x3dxx	2437	-1.7	8.0	Pass
0x47xx	2452	4.1	8.0	Pass

Note 1:	Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



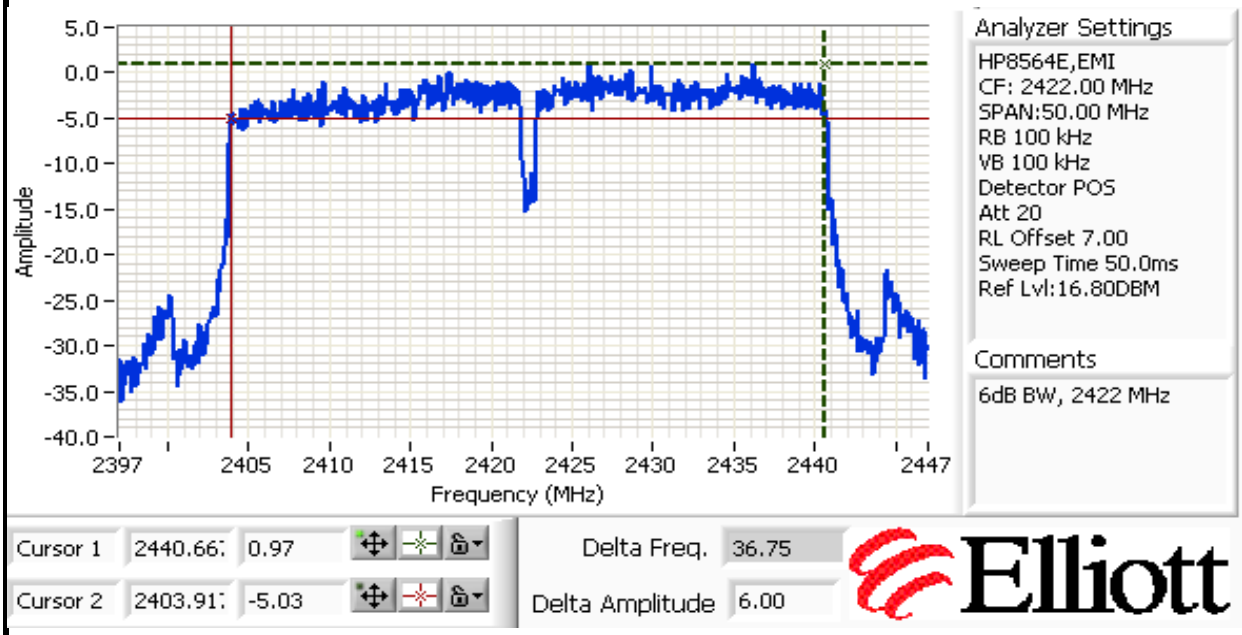


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

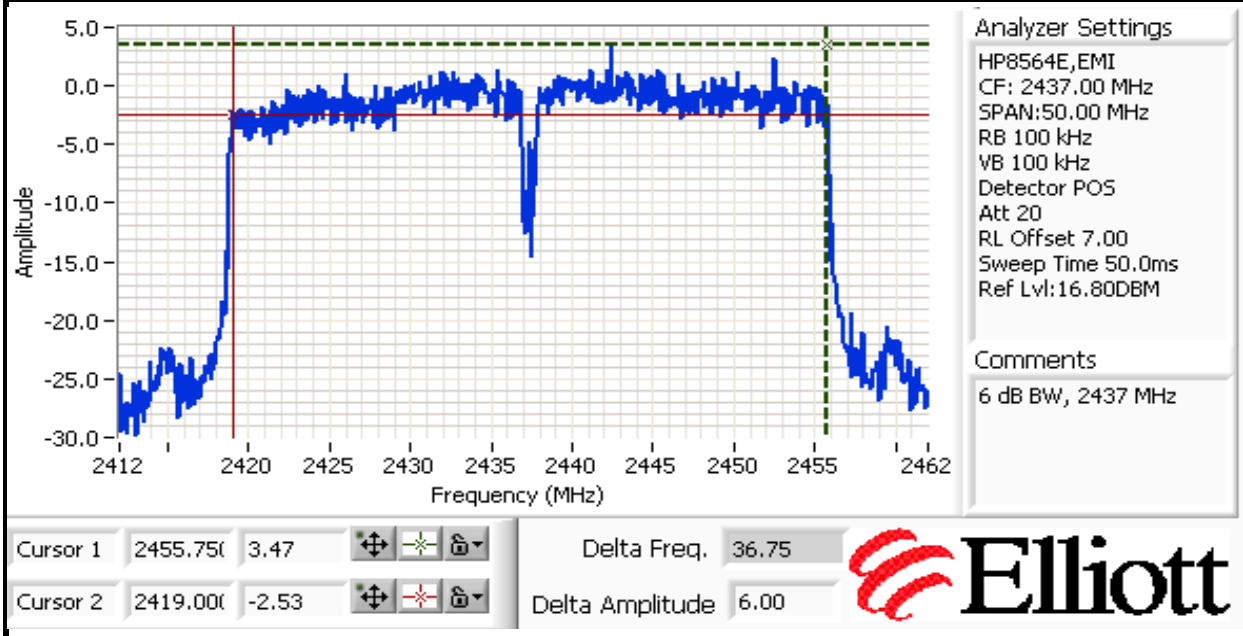
Run #3: Signal Bandwidth

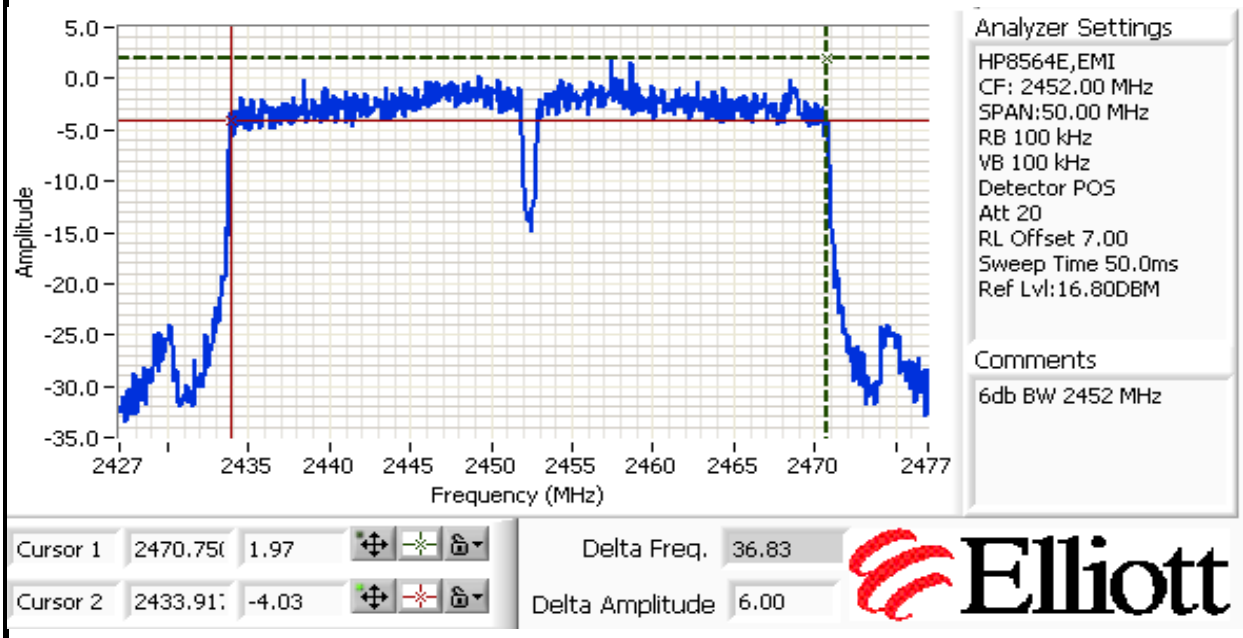
Power Setting	Frequency (MHz)	Resolution Bandwidth	Bandwidth (MHz) 6dB	99%
0x43xx	2422	100kHz	36.8	36.9
0x3dxx	2437	100kHz	36.8	36.9
0x47xx	2452	100kHz	36.8	36.9

Note 1:	99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB

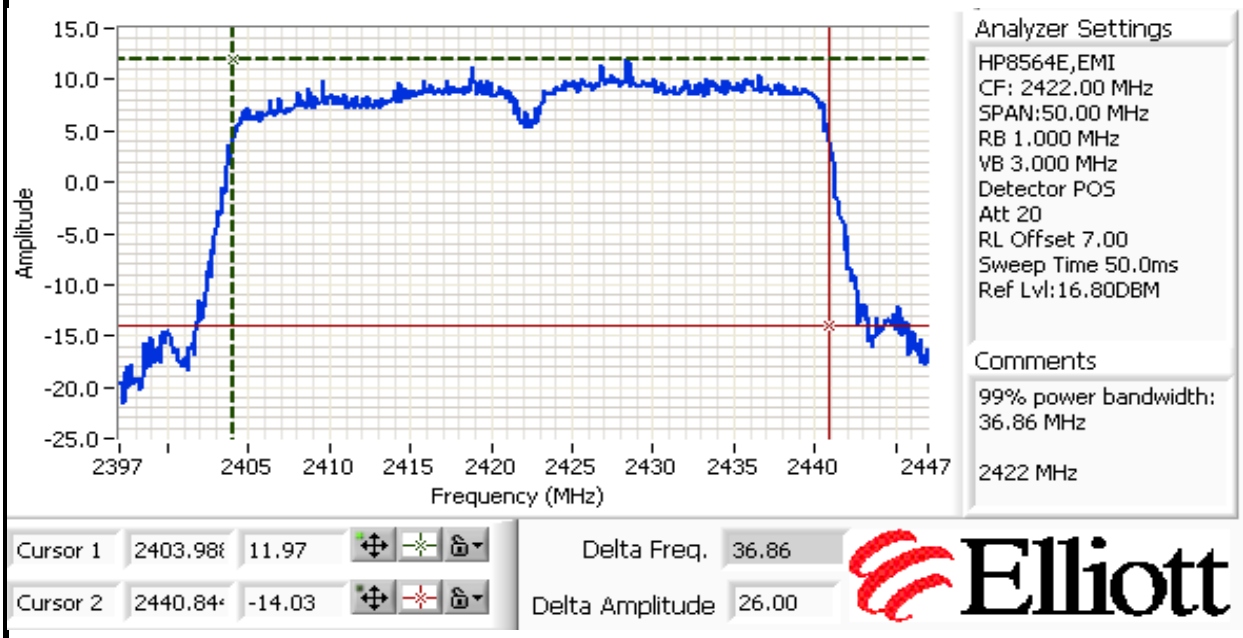


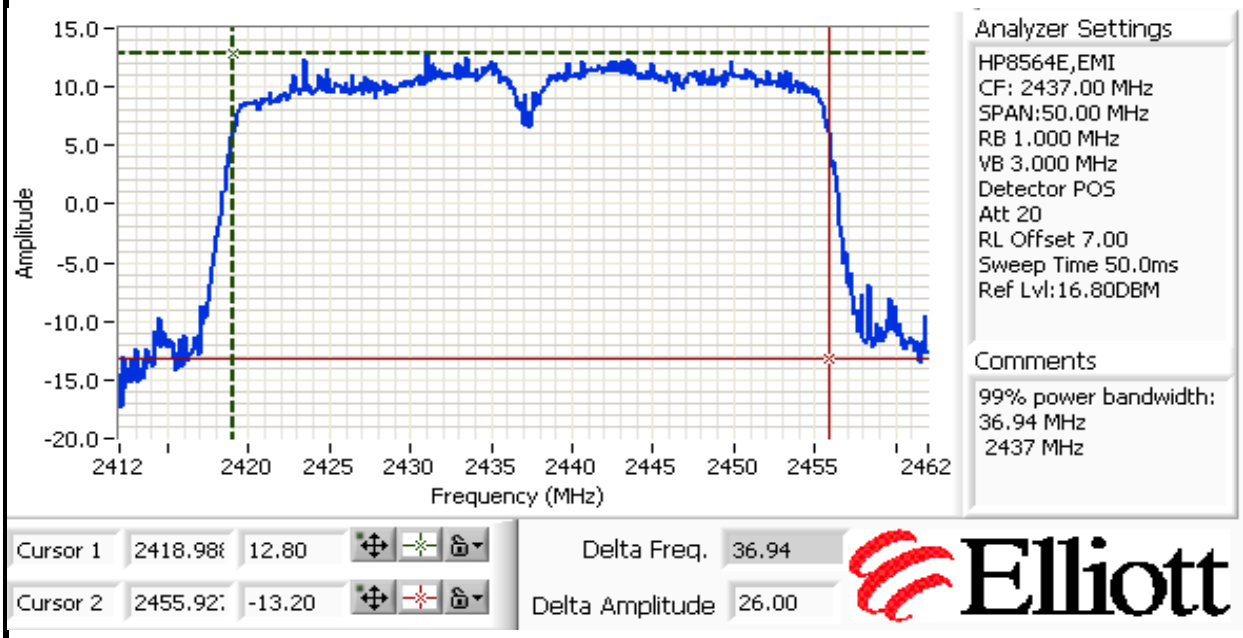
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



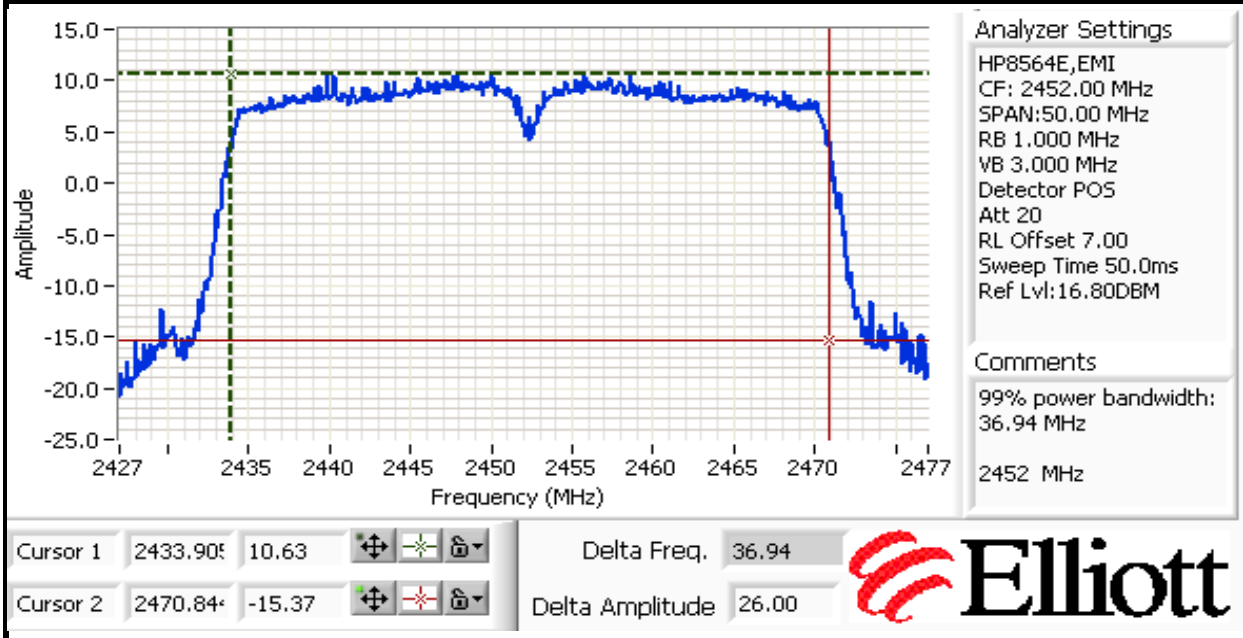


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A





Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

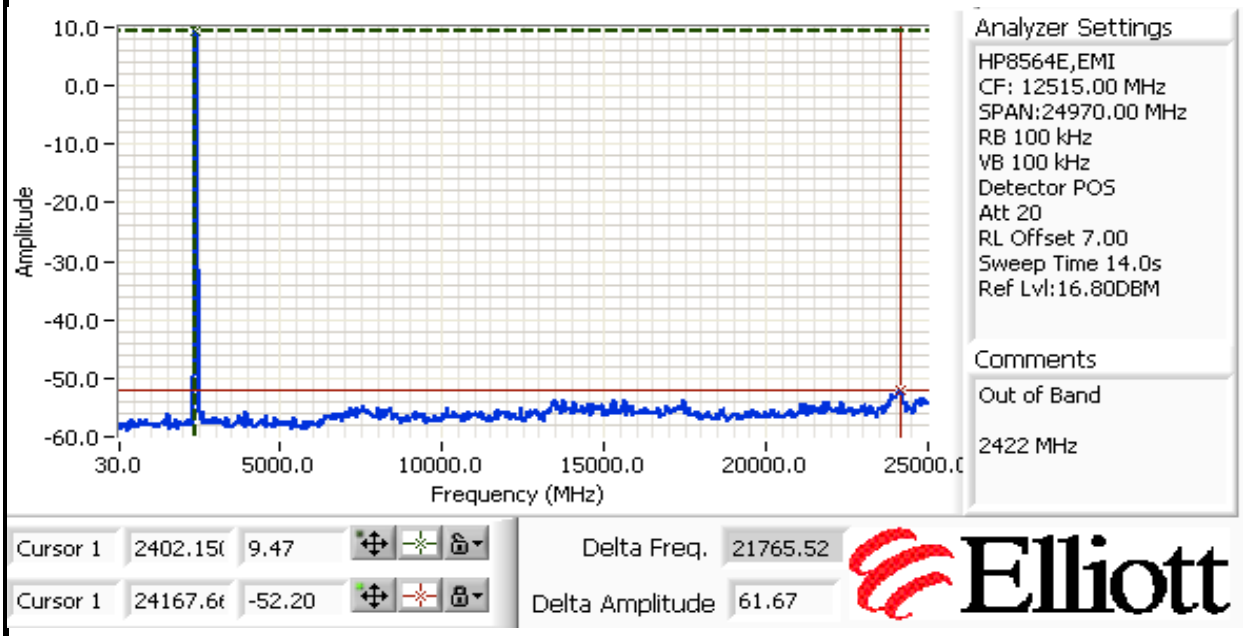


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #4: Out of Band Spurious Emissions

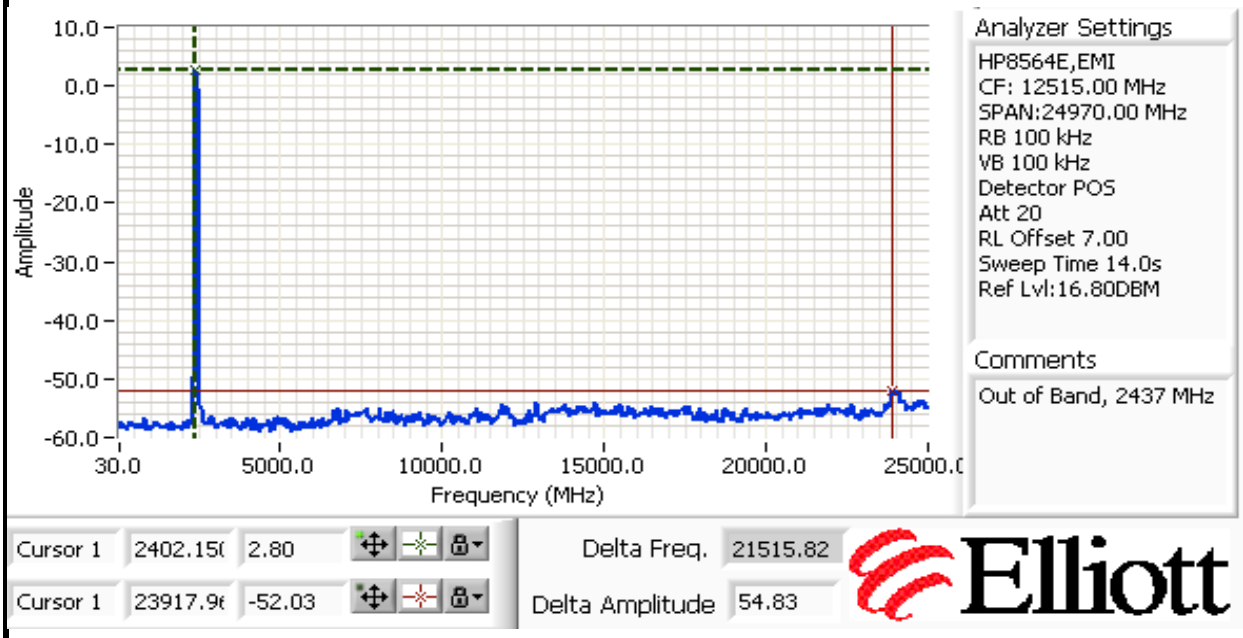
Frequency (MHz)	Limit	Result
2422	-30dBc	-61.7 dBc @ 21.765 GHz
2437	-30dBc	-54.8 dBc @ 21.515 GHz
2452	-30dBc	-57.2 dBc @ 21.682 GHz

Plots for low channel, power setting(s) = 0x43xx

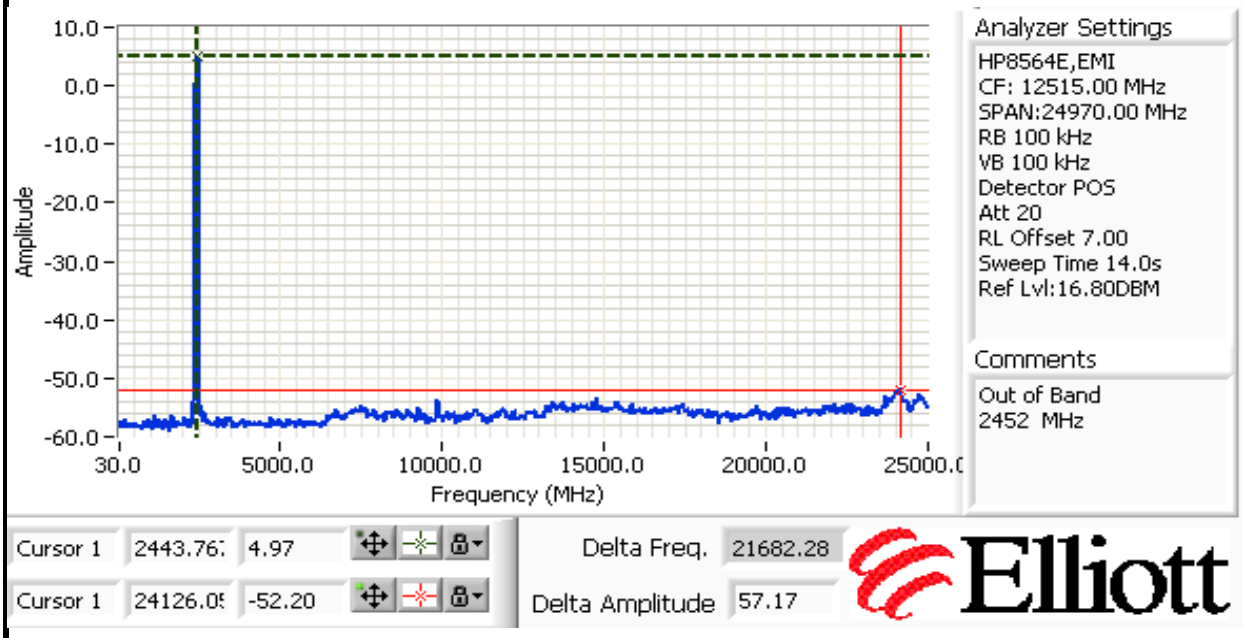


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Plots for center channel, power setting(s) = 0x3dxx



Plots for high channel, power setting(s) = 0x47xx



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
MIMO (2.4GHz = 802.11n, 20 MHz)
Power, Bandwidth and Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 3/20/2007
Test Engineer: Juan Martinez
Test Location: Fremont Chamber #3

Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:

Temperature: 18 °C
Rel. Humidity: 45 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Output Power	15.247(b)	Pass	21.5 dBm
2	Power spectral Density (PSD)	15.247(d)	Pass	-0.9 dBm/3kHz
3	6dB Bandwidth	15.247(a)	Pass	17.8 MHz
3	99% Bandwidth	RSS GEN	-	18.4 MHz
4	Spurious emissions	15.247(b)	Pass	Refer to plots

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1: Output Power, MCS0

Transmitted signal on chain is coherent ? Yes

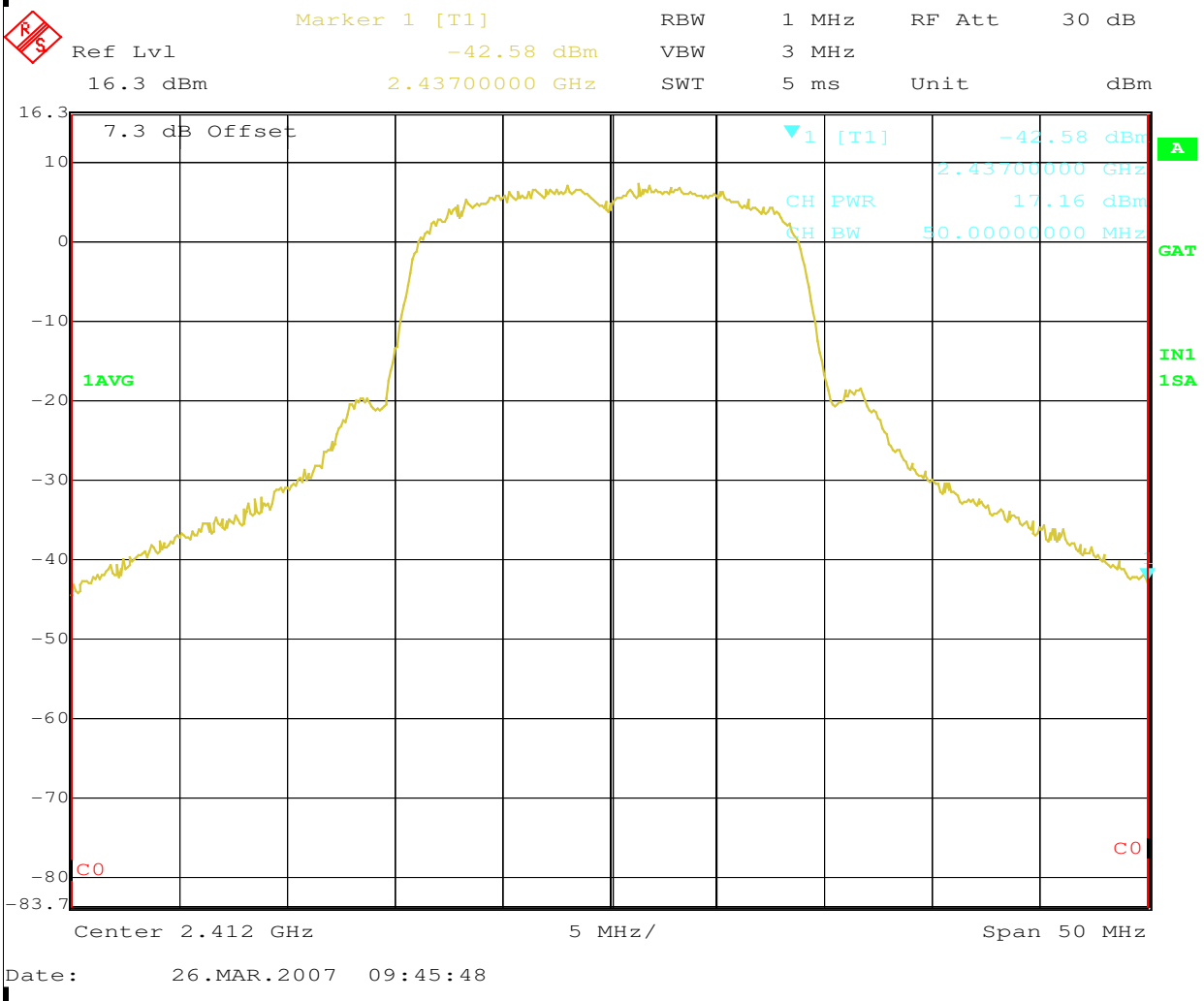
ESI Power Measurements

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x433E	2412	17.1	17.3	20.2	3.6	3.6	6.6	26.8	0.481
0x3F3A	2437	18.7	18.3	21.5	3.6	3.6	6.6	28.1	0.649
0x4C46	2462	16.2	16.3	19.3	3.6	3.6	6.6	25.9	0.386

Note 1:	RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was not continuous but the ESI analyzer was configured with a gated sweep such that the analyzer was only sweeping when the device was transmitting) and power integration over 30 MHz.
Note 2:	EIRP - if transmit chains are coherent then the EIRP is calculated from the sum of the antenna gains plus the total power (i.e. beam-forming is assumed because of coherency on the chains). If the individual chains are incoherent then the EIRP is calculated from the sum of the individual EIRPs for each chain.
Note 3:	If the transmit chains are coherent then the total system antenna gain is the sum of the numeric gains for each antenna. If the transmit chains are incoherent then the system antenna gain is not applicable as each transmit chain can be treated independently.
Note 4:	Power setting - if a single number the same power setting was used for each chain. If multiple numbers the power setting for each chain is separated by a comma (e.g. x,y would indicate power setting x for chain 1, power setting y for chain 2.

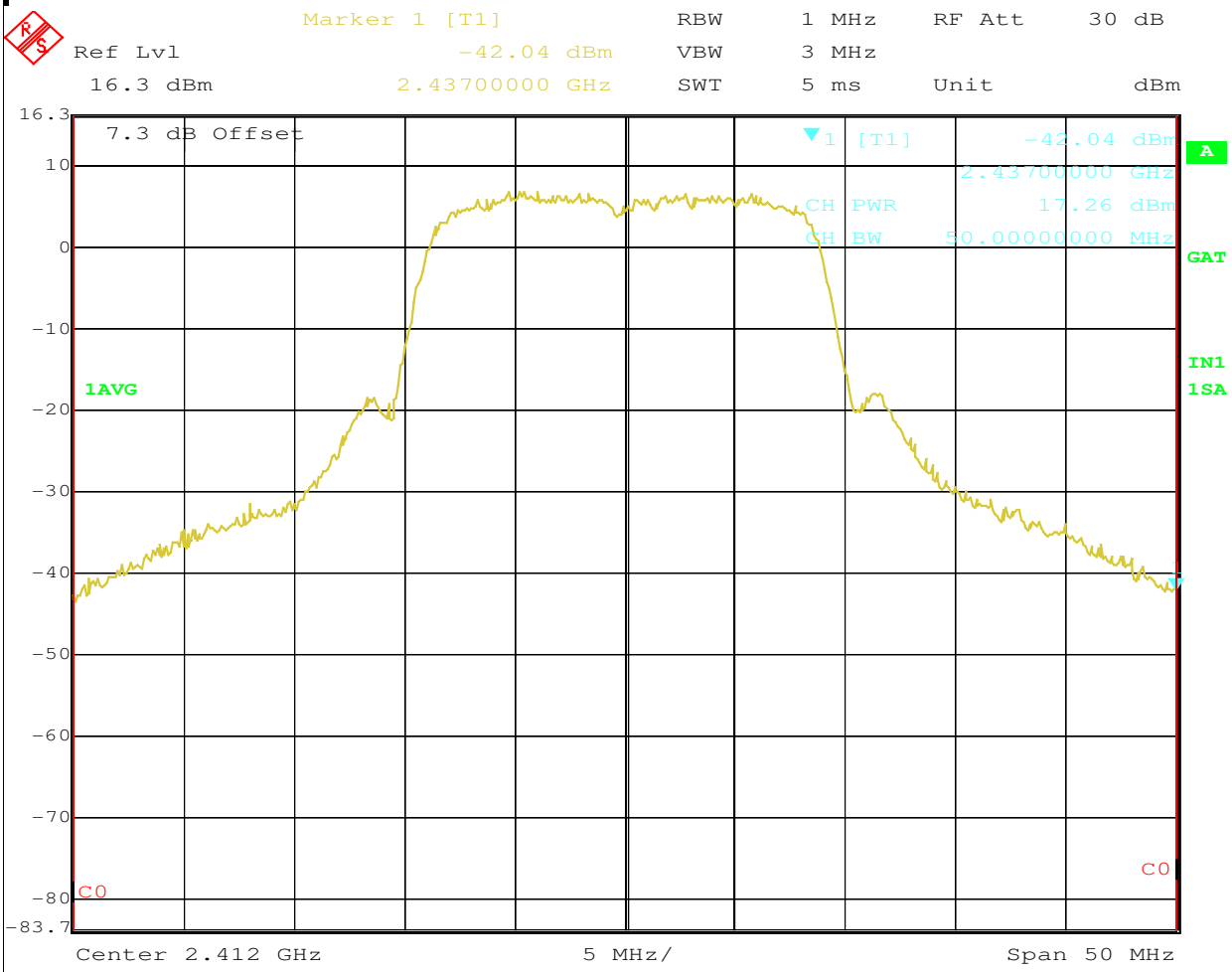
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Chain 1



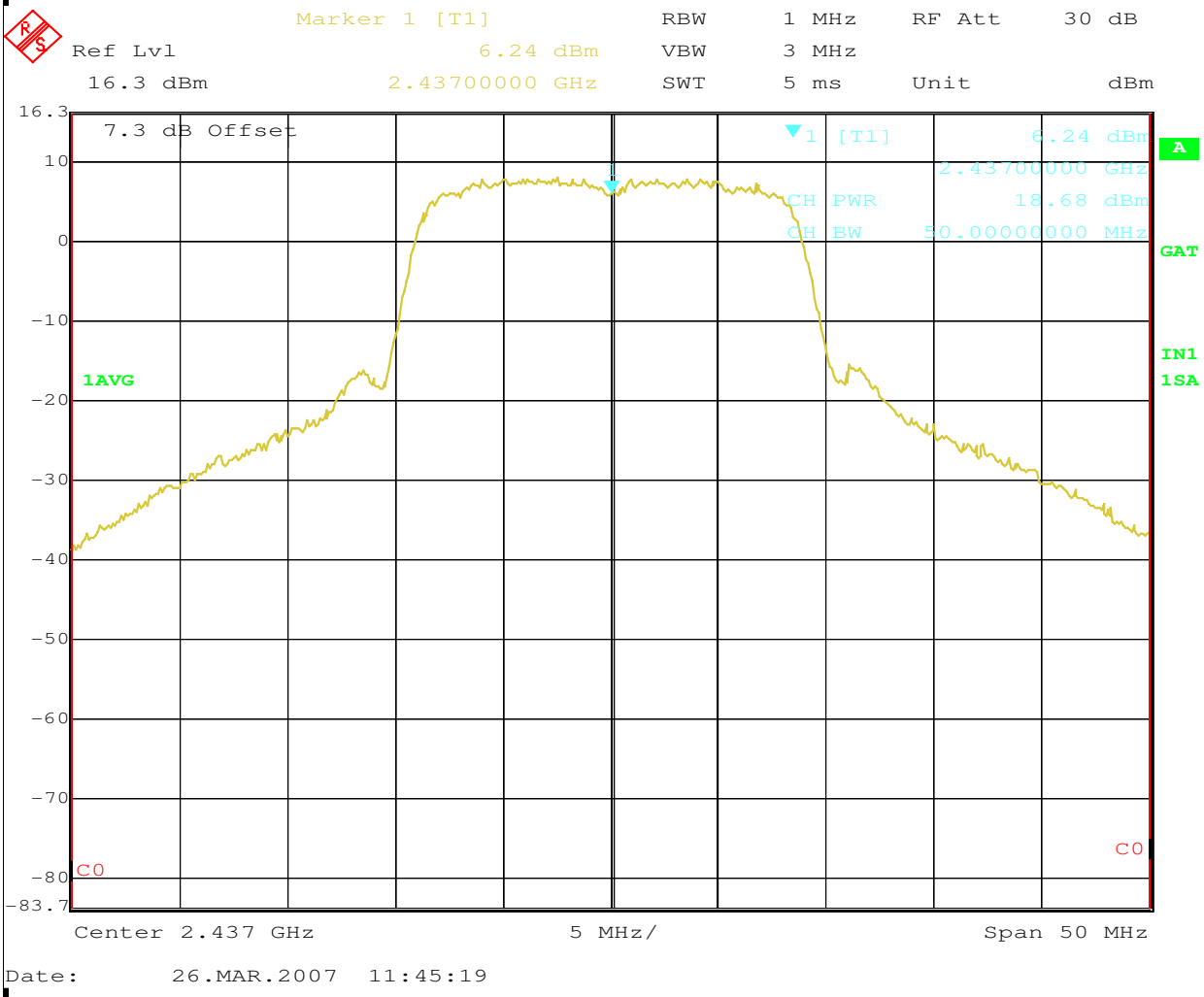
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Chain 2



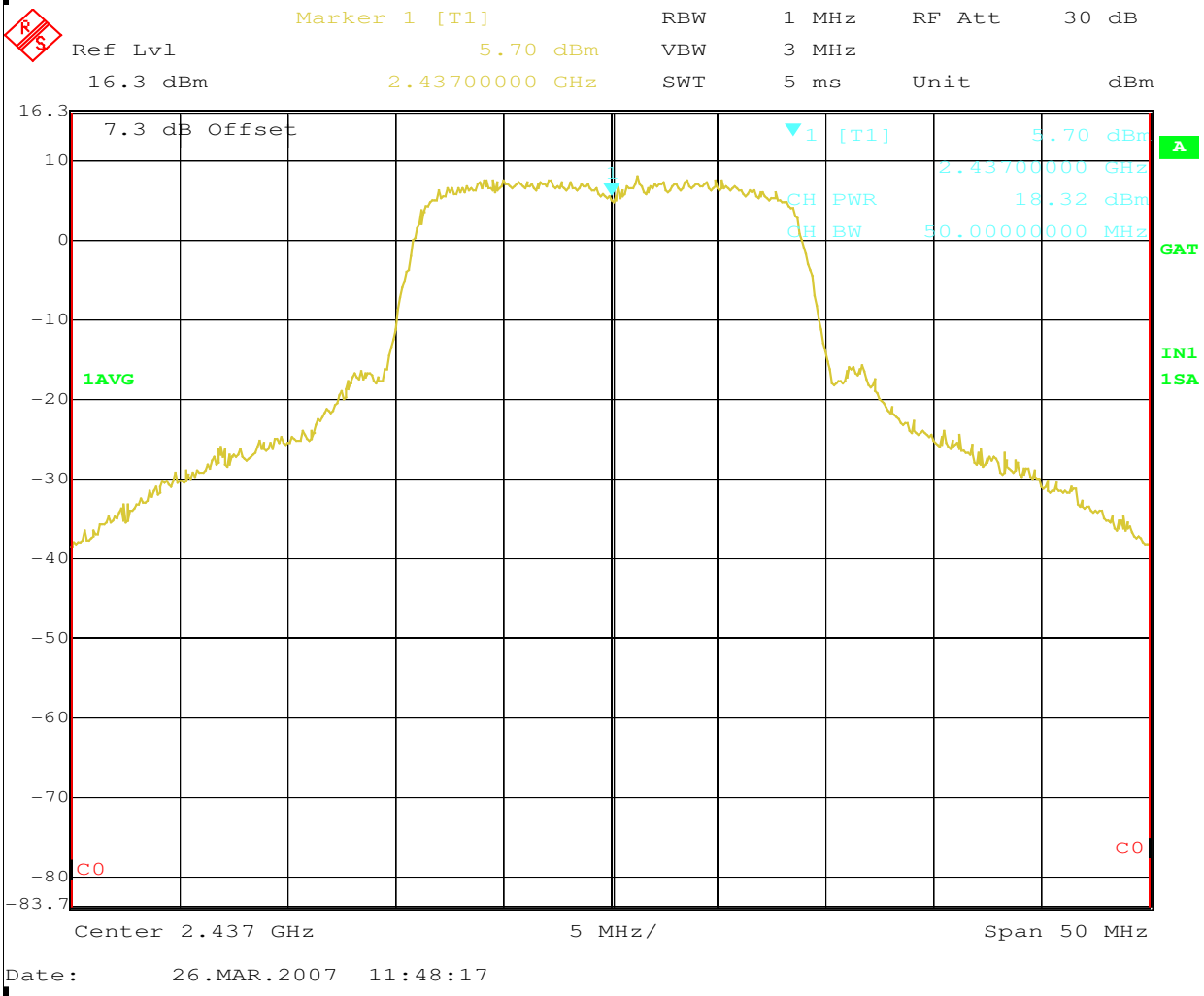
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Chain 1



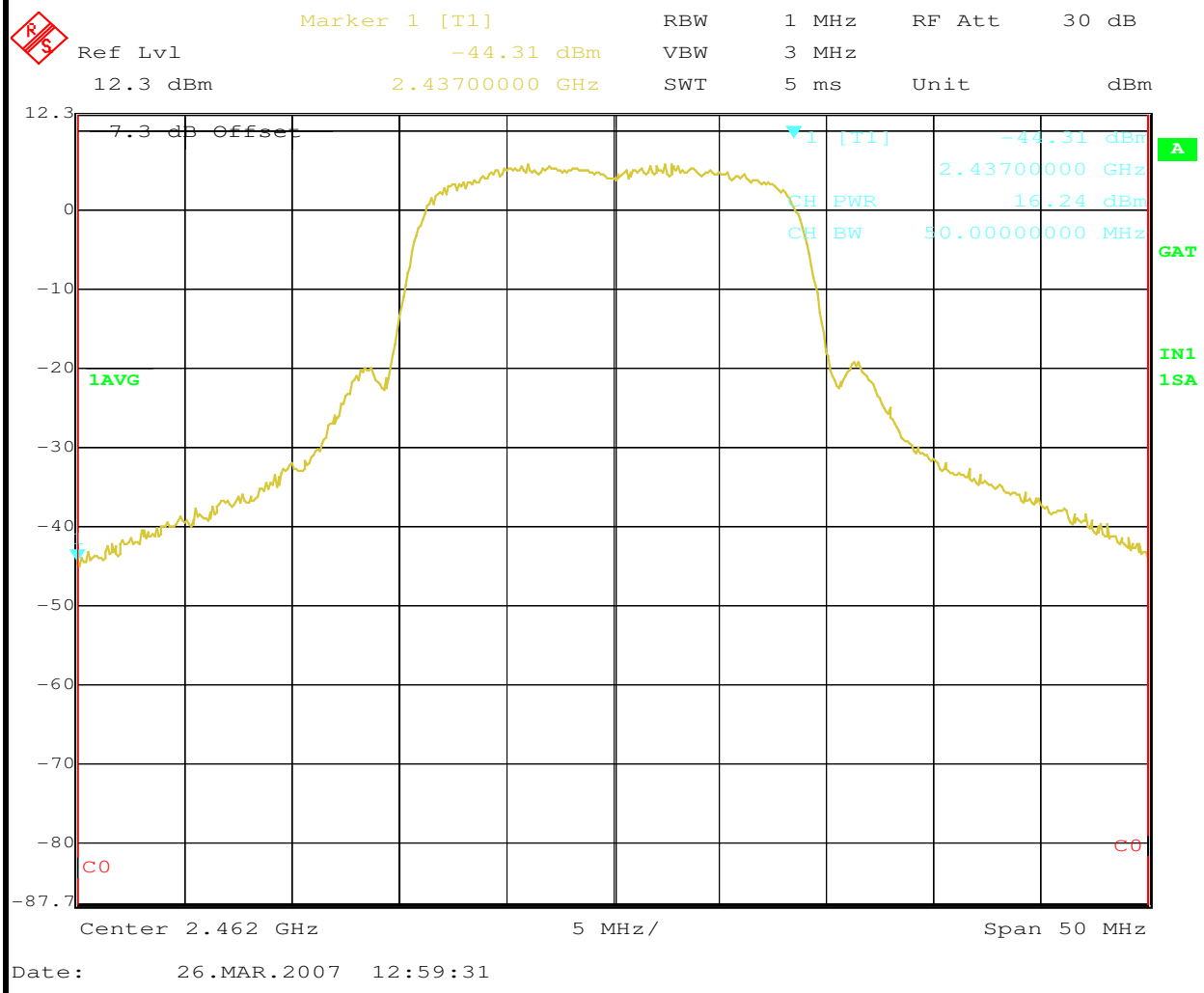
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Chain 2



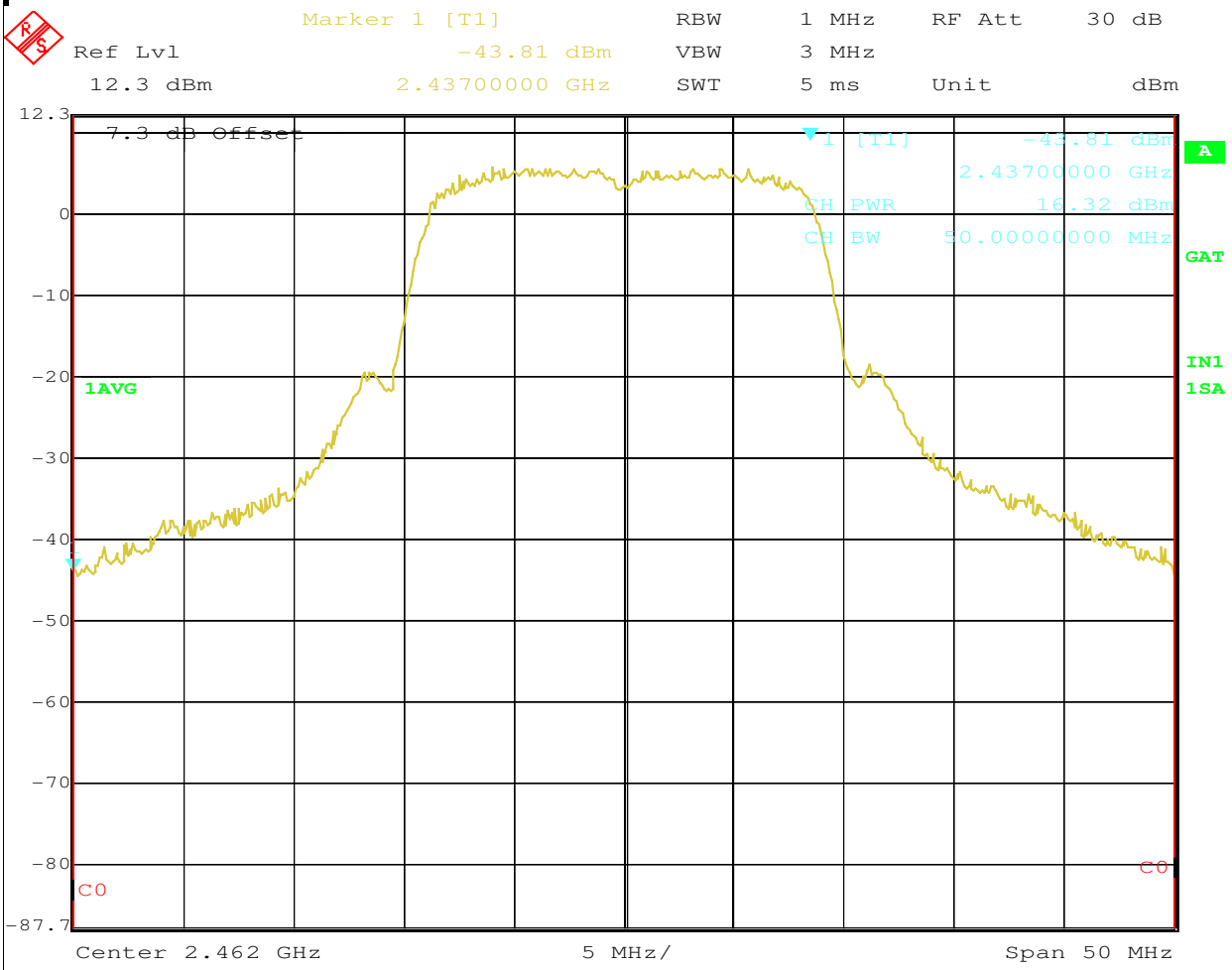
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Chain 1



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Chain 2



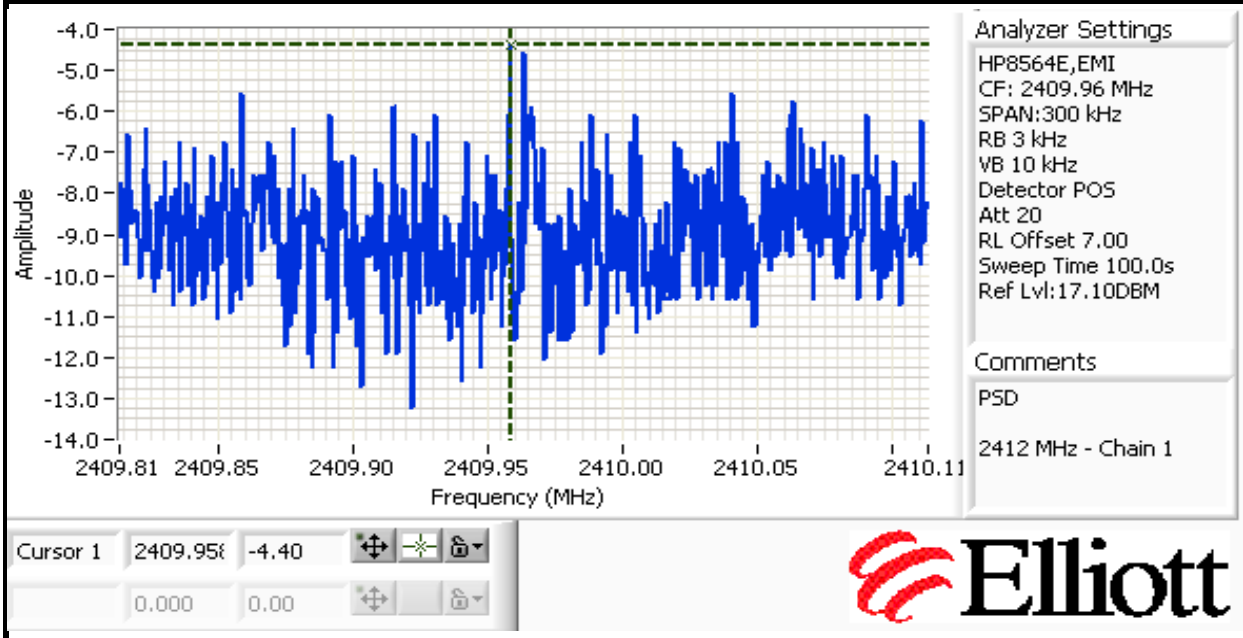
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

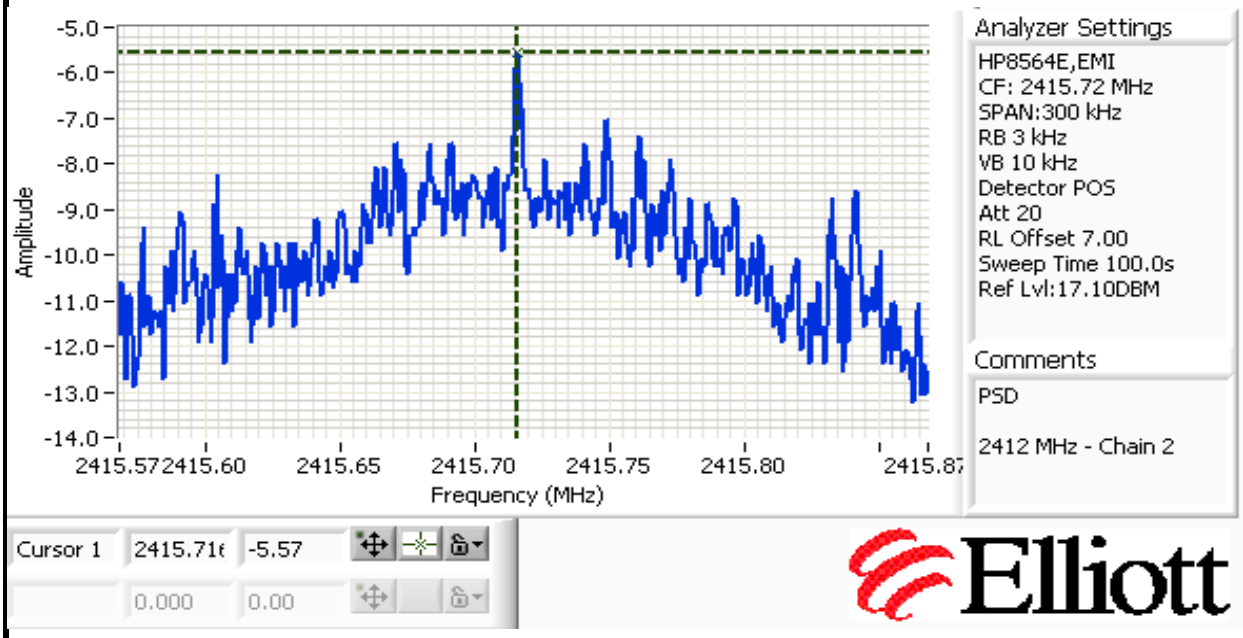
Run #2: Power spectral Density

Power Setting	Frequency (MHz)	PSD (dBm/3kHz) Note 1			Limit	Result
		Chain 1	Chain 2	Total	dBm/3kHz	
0x433E	2412	-4.4	-5.6	-1.9	8.0	Pass
0x3F3A	2437	-2.3	-6.4	-0.9	8.0	Pass
0x4C46	2462	-3.6	-7.7	-2.2	8.0	Pass

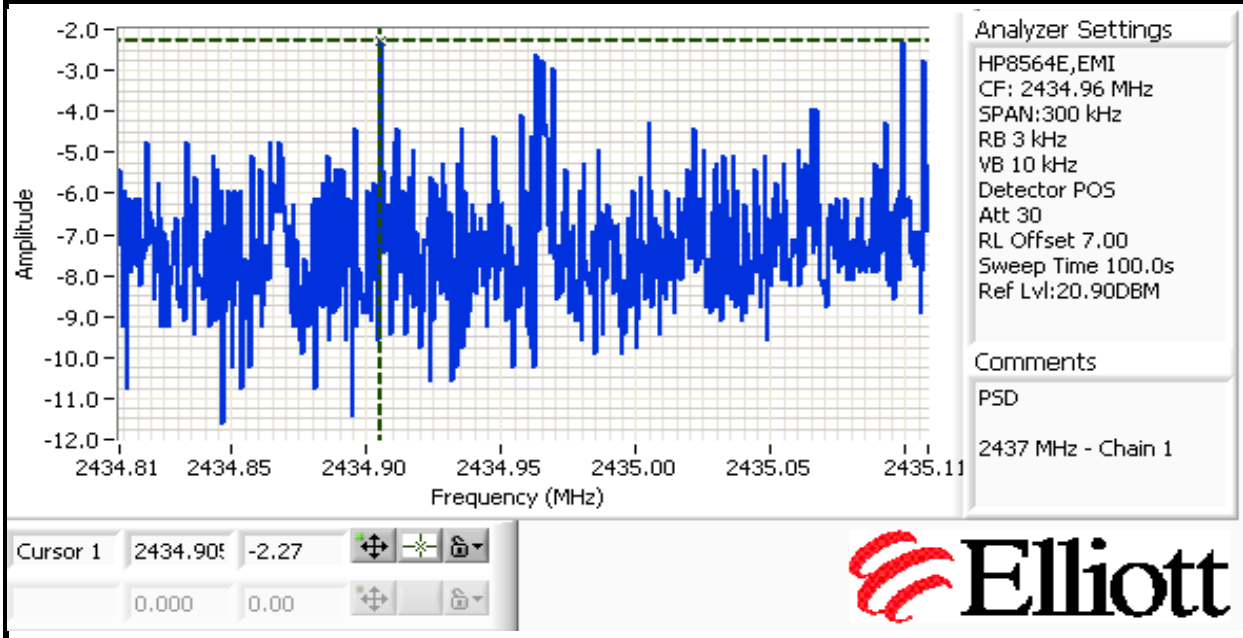
Note 1:	Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.

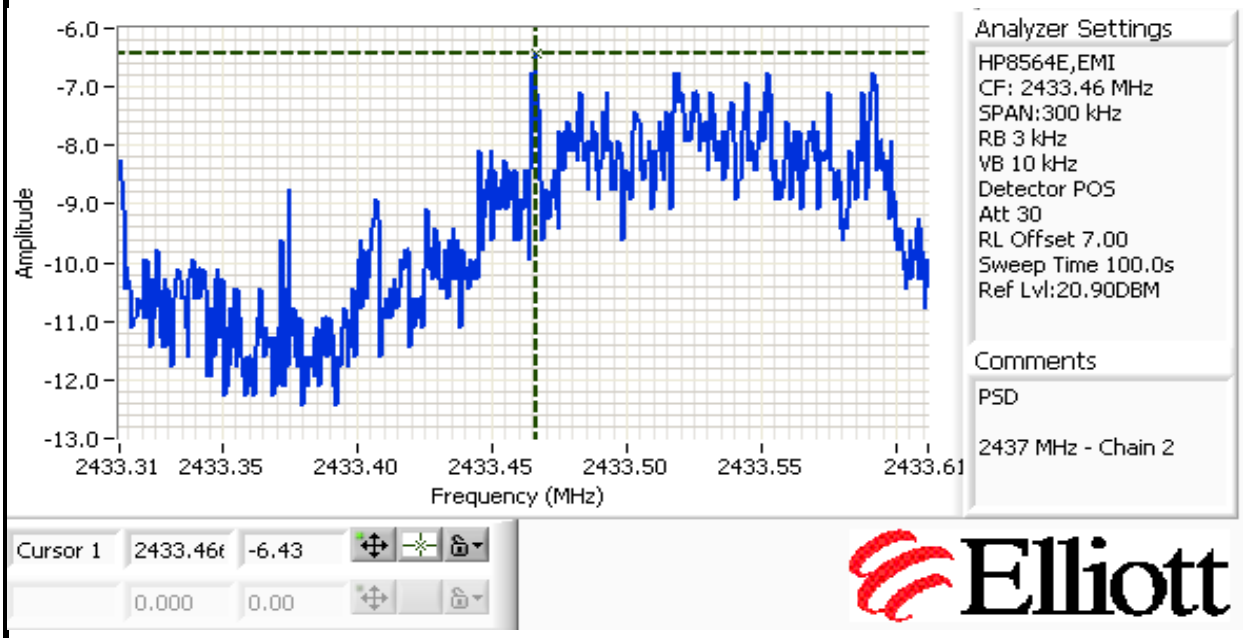
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



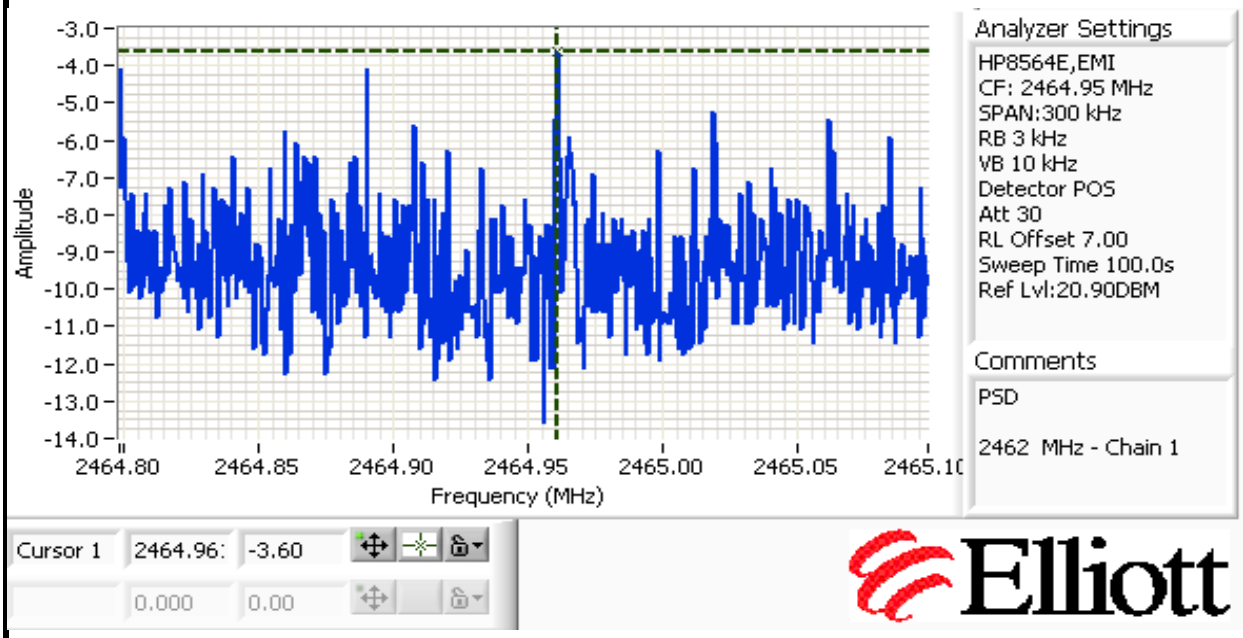


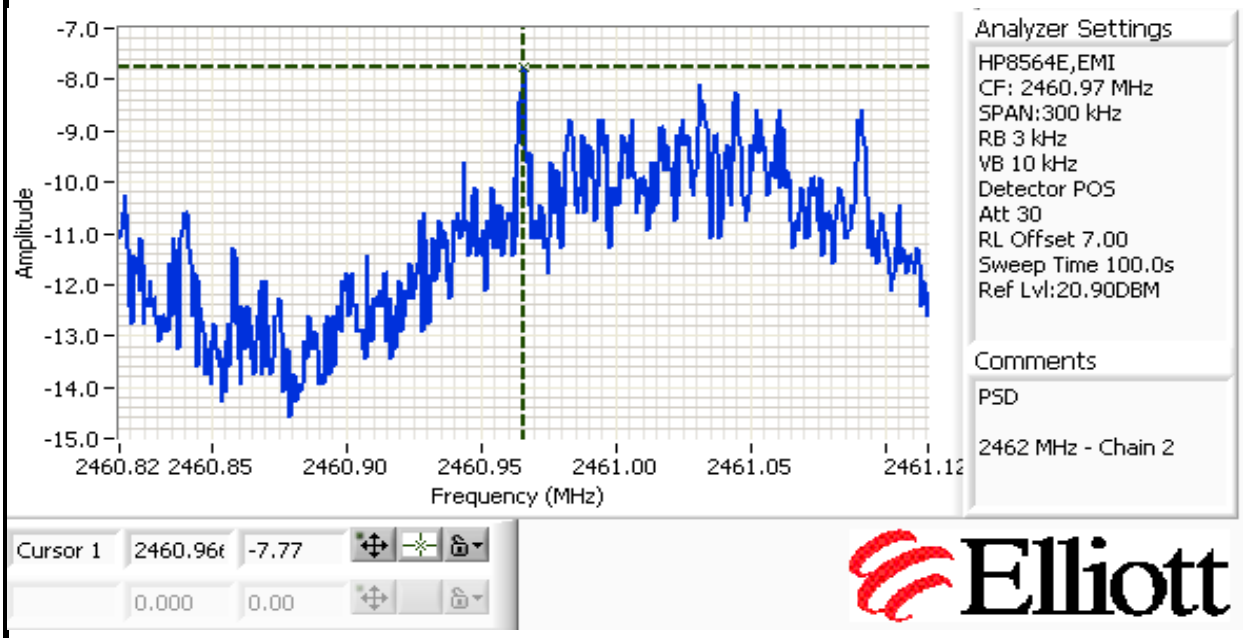
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A





Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



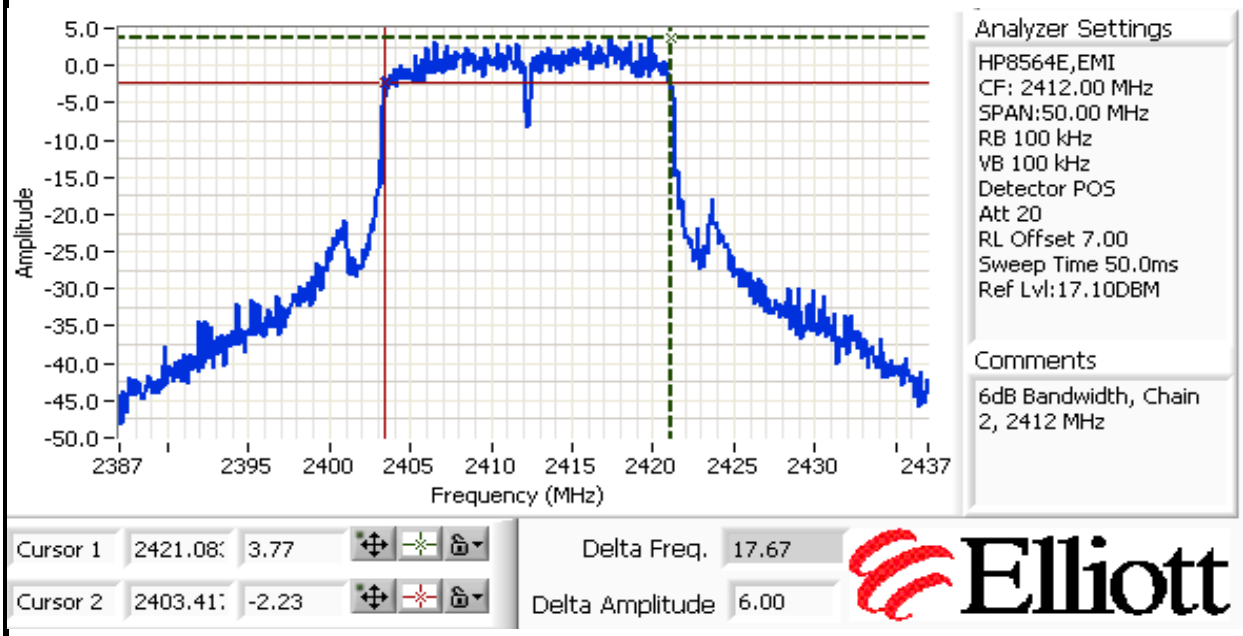


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

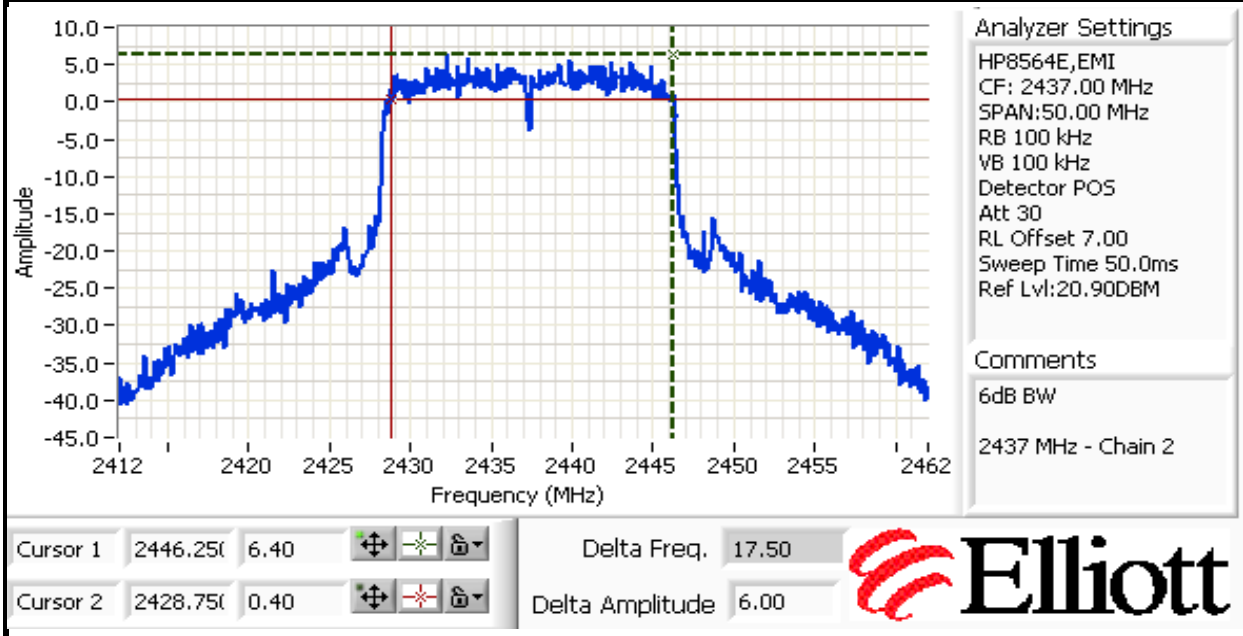
Run #3: Signal Bandwidth

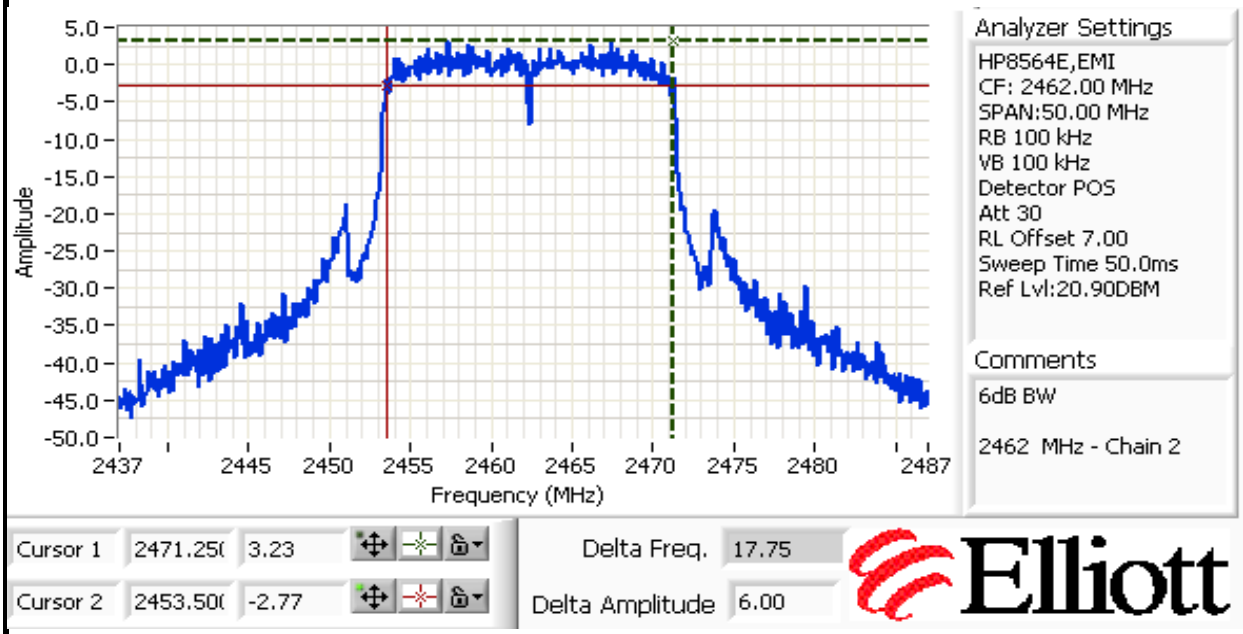
Power Setting	Frequency (MHz)	Resolution Bandwidth	Bandwidth (MHz) 6dB	99%
0x433E	2412	100kHz	17.7	18.2
0x3F3A	2437	100kHz	17.5	18.4
0x4C46	2462	100kHz	17.8	18.4

Note 1:	Measured on a single chain (Chain 2)
Note 2:	99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB

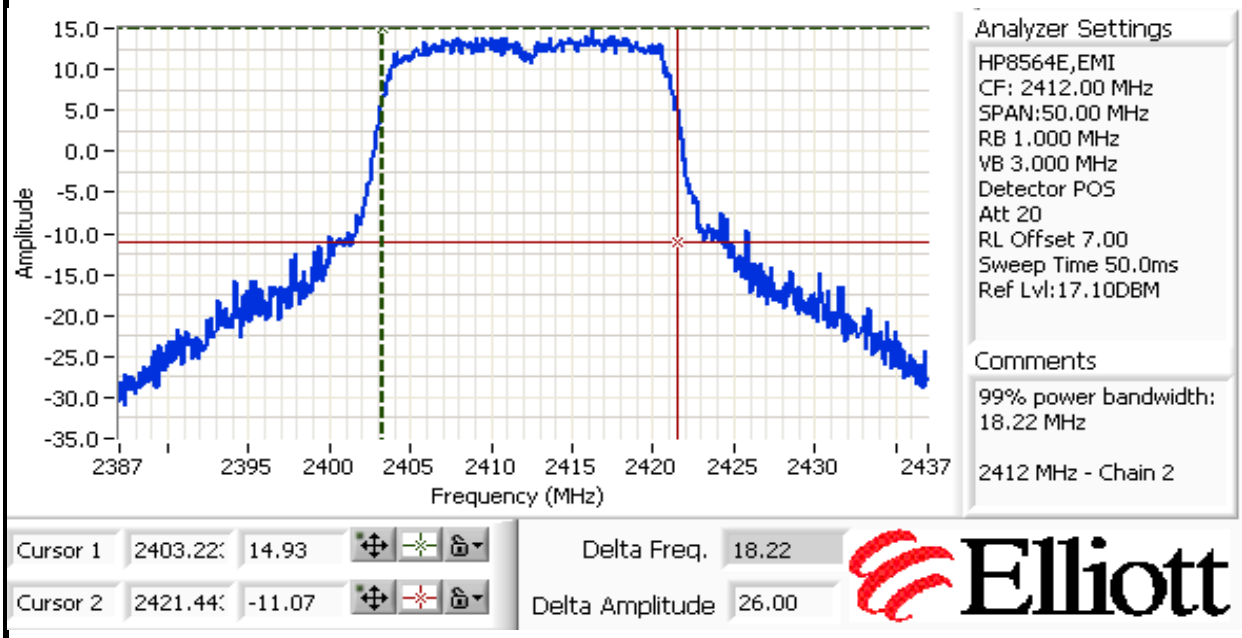


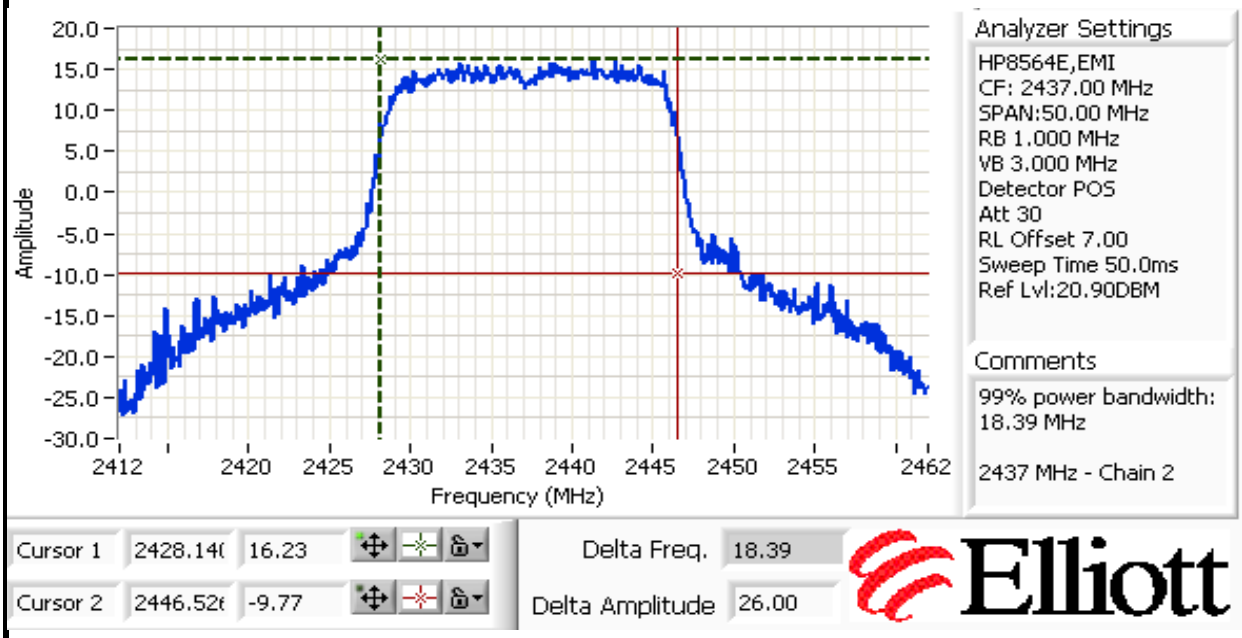
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



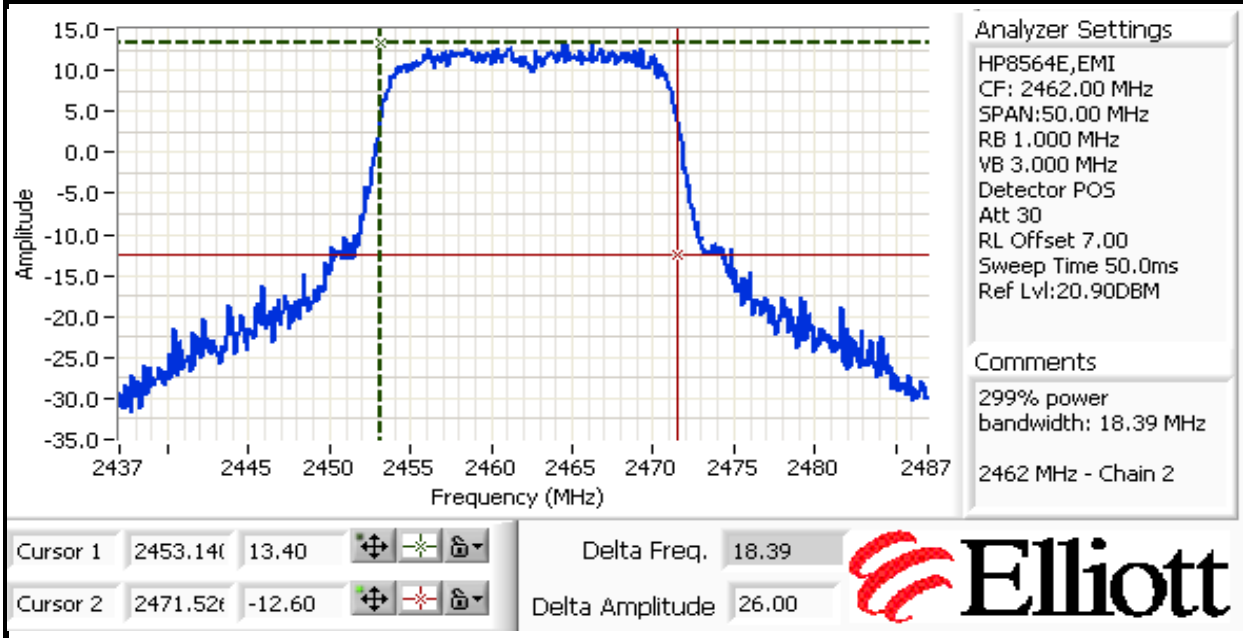


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A





Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



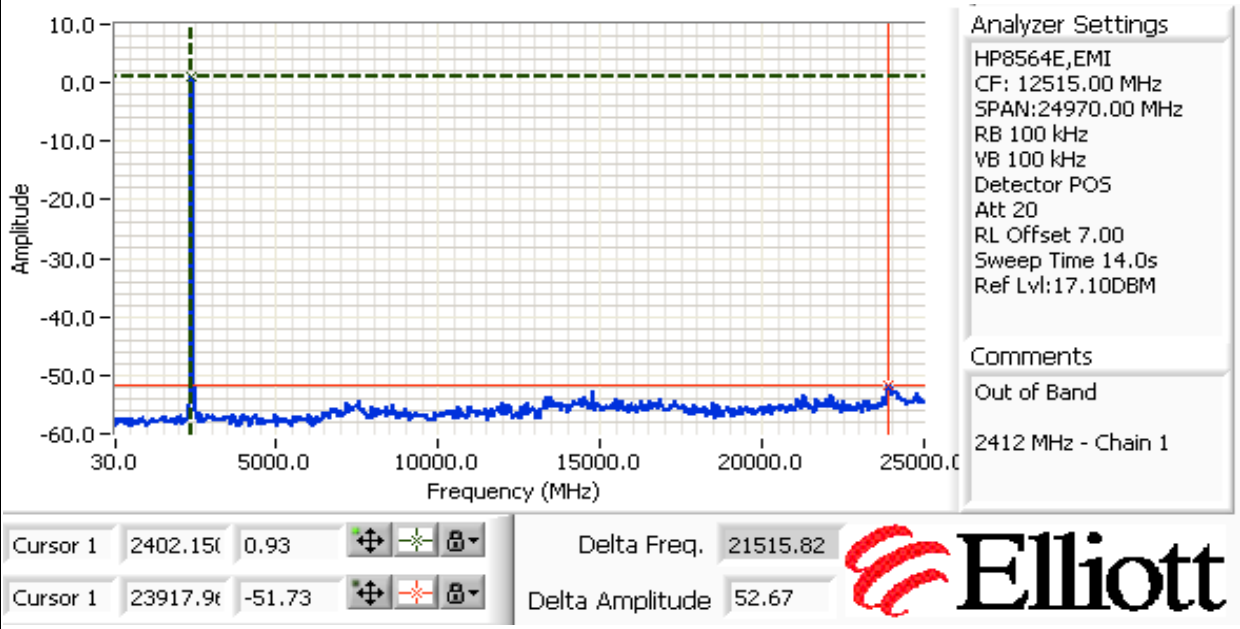
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #4: Out of Band Spurious Emissions

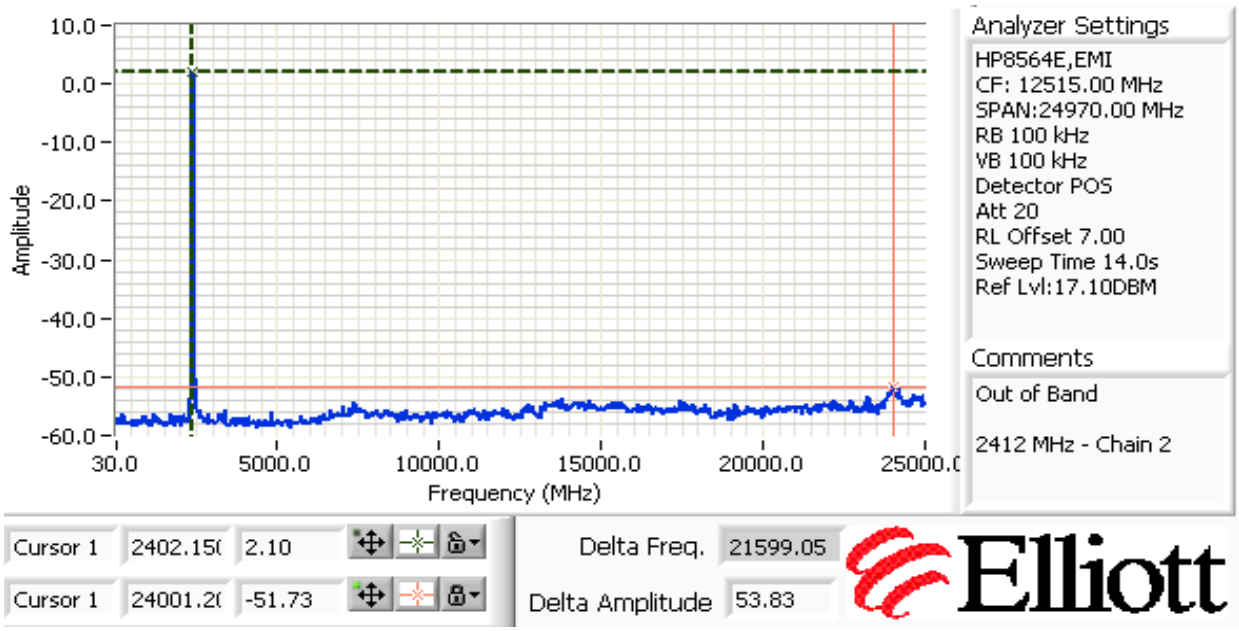
Power Setting	Frequency (MHz)	Limit	Result
0x433E	2412	-30dBc	-52.7 dBc @ 21.515 GHz
0x3F3A	2437	-30dBc	-47.2 dBc @ 21.474 GHz
0x4C46	2462	-30dBc	-42.5 dBc @ 21.557 GHz

Note 1:	Measured on each chain individually

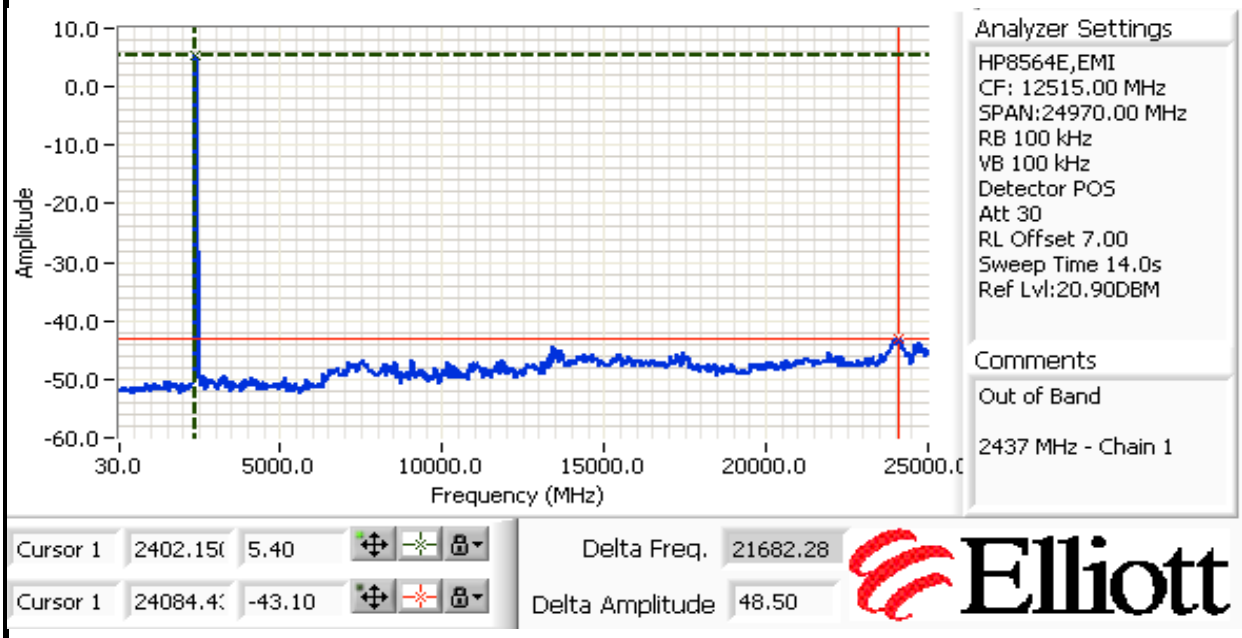
Plots for low channel, power setting(s) = 0x433E



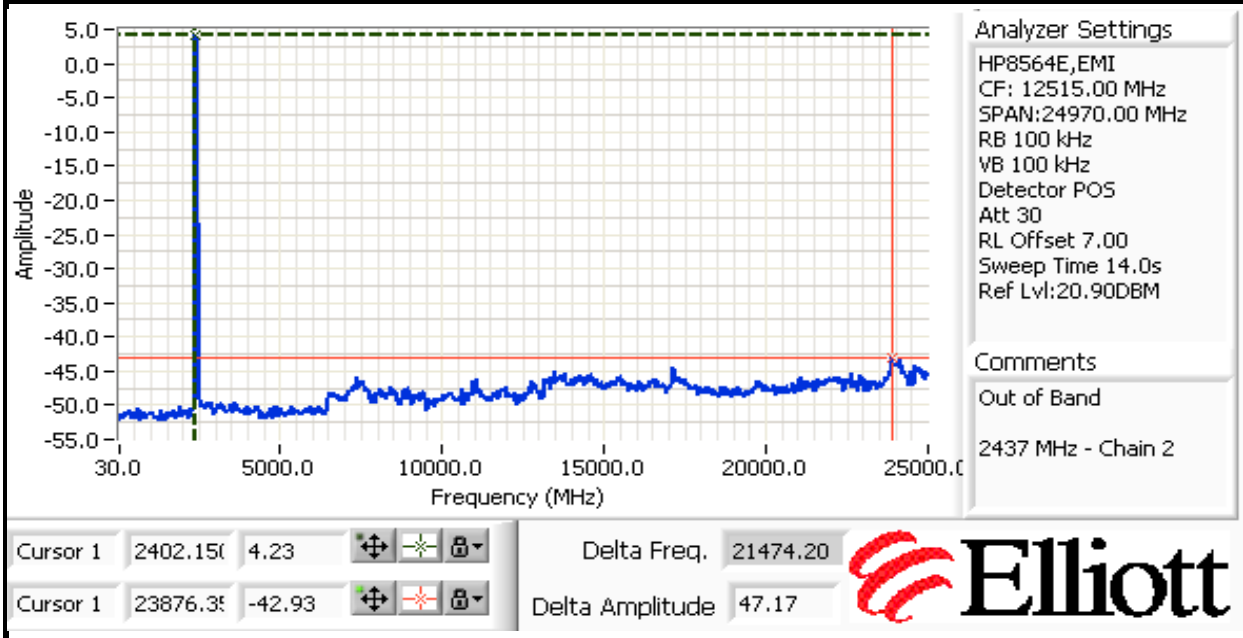
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



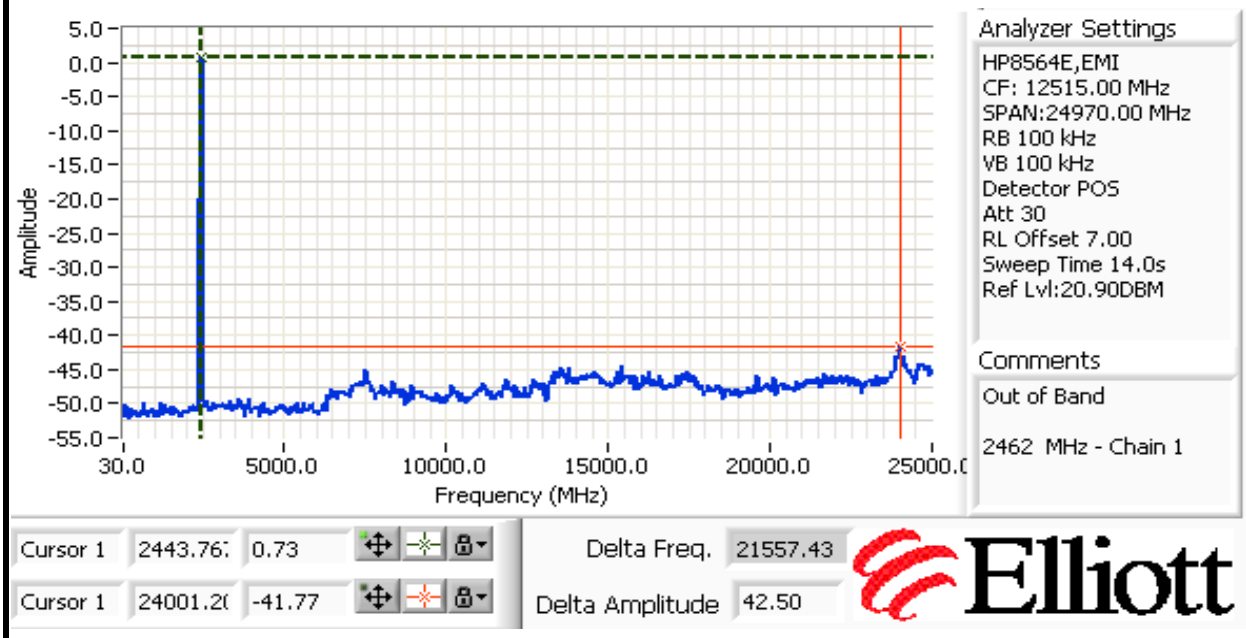
Plots for center channel, power setting(s) = 0x3F3A



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

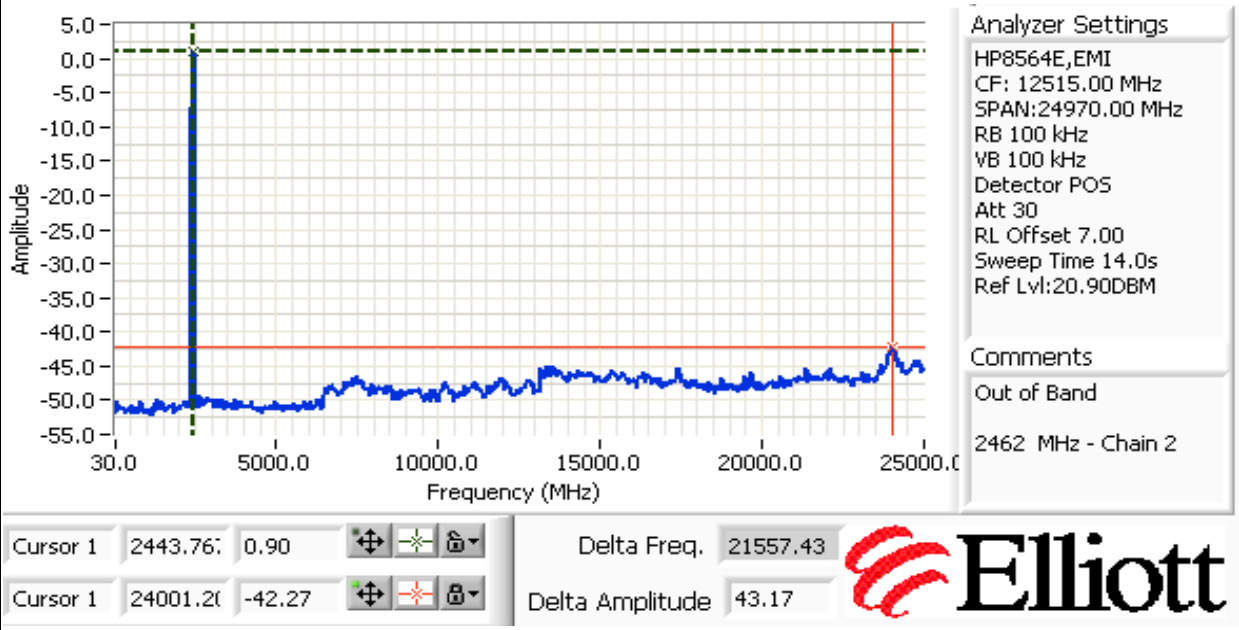


Plots for high channel, power setting(s) = 0x4C46



EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
MIMO (2.4GHz = 802.11n, 40 MHz)
Power, Bandwidth and Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 3/20/2007 and 3/27/07
Test Engineer: Juan M. and Mark H.
Test Location: Fremont Chamber #3
Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:

Temperature: 18 °C
Rel. Humidity: 45 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Output Power	15.247(b)	Pass	20.6 dBm
2	Power spectral Density (PSD)	15.247(d)	Pass	1.0 dBm/3kHz
3	6dB Bandwidth	15.247(a)	Pass	36.7 MHz
3	99% Bandwidth	RSS GEN	-	37.1 MHz
4	Spurious emissions	15.247(b)	Pass	Refer to plots

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1: Output Power, MCS0

Transmitted signal on chain is coherent ? Yes

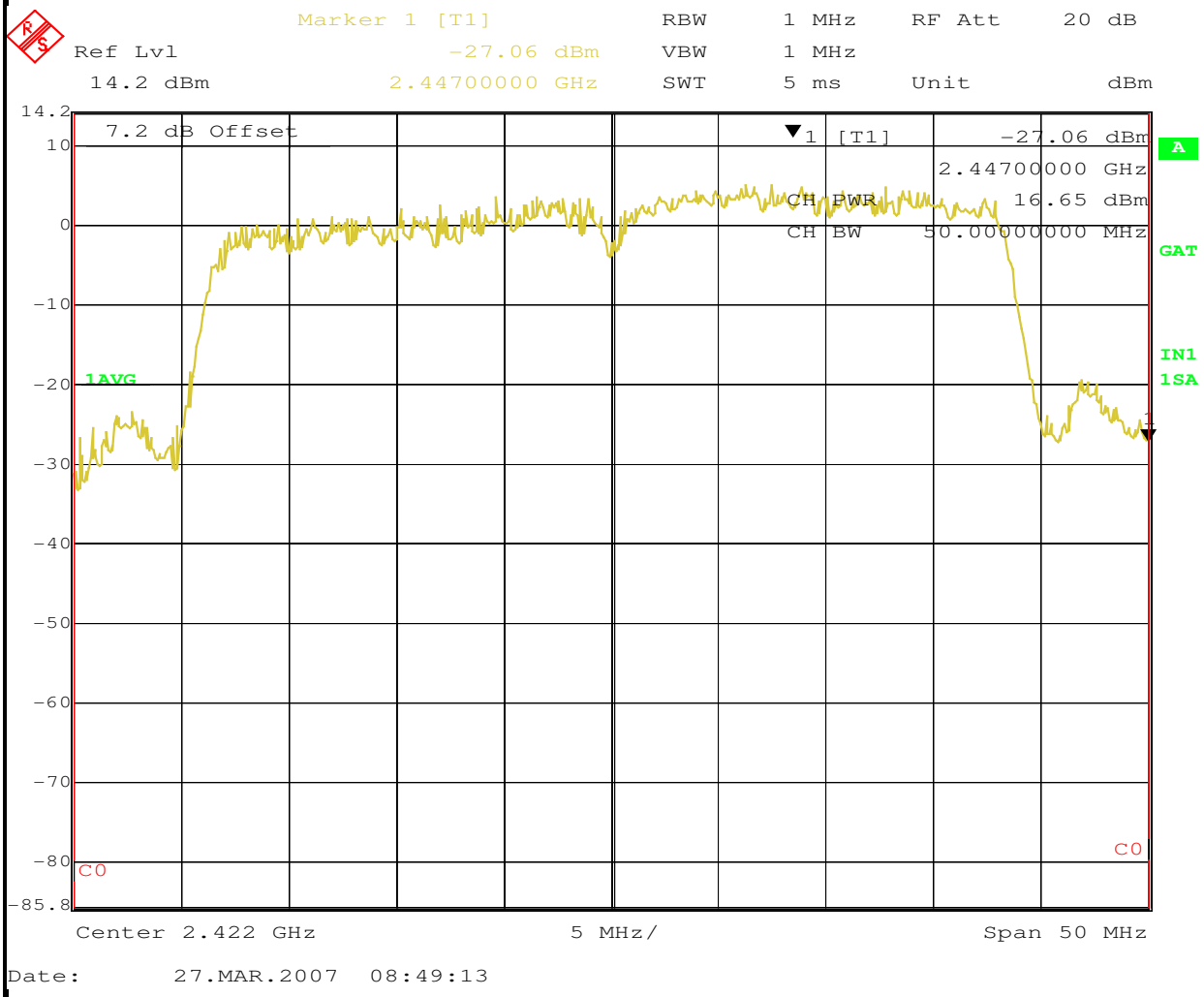
ESI Power Measurements

Power Setting[4]	Frequency (MHz)	Output Power (dBm) Note 1			Antenna Gain (dBi) Note 3			EIRP Note 2	
		Chain 1	Chain 2	Total	Chain 1	Chain 2	Total	dBm	W
0x423E	2422	16.6	16.6	19.6	3.6	3.6	6.6	26.2	0.419
0x403C	2437	17.7	17.5	20.6	3.6	3.6	6.6	27.2	0.527
0x4A46	2452	15.9	15.5	18.7	3.6	3.6	6.6	25.3	0.341

Note 1:	RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was not continuous but the ESI analyzer was configured with a gated sweep such that the analyzer was only sweeping when the device was transmitting) and power integration over 50 MHz
Note 2:	EIRP - if transmit chains are coherent then the EIRP is calculated from the sum of the antenna gains plus the total power (i.e. beam-forming is assumed because of coherency on the chains). If the individual chains are incoherent then the EIRP is calculated from the sum of the individual EIRPs for each chain.
Note 3:	If the transmit chains are coherent then the total system antenna gain is the sum of the numeric gains for each antenna. If the transmit chains are incoherent then the system antenna gain is not applicable as each transmit chain can be treated independently.
Note 4:	Power setting - if a single number the same power setting was used for each chain. If multiple numbers the power setting for each chain is separated by a comma (e.g. x,y would indicate power setting x for chain 1, power setting y for chain 2.

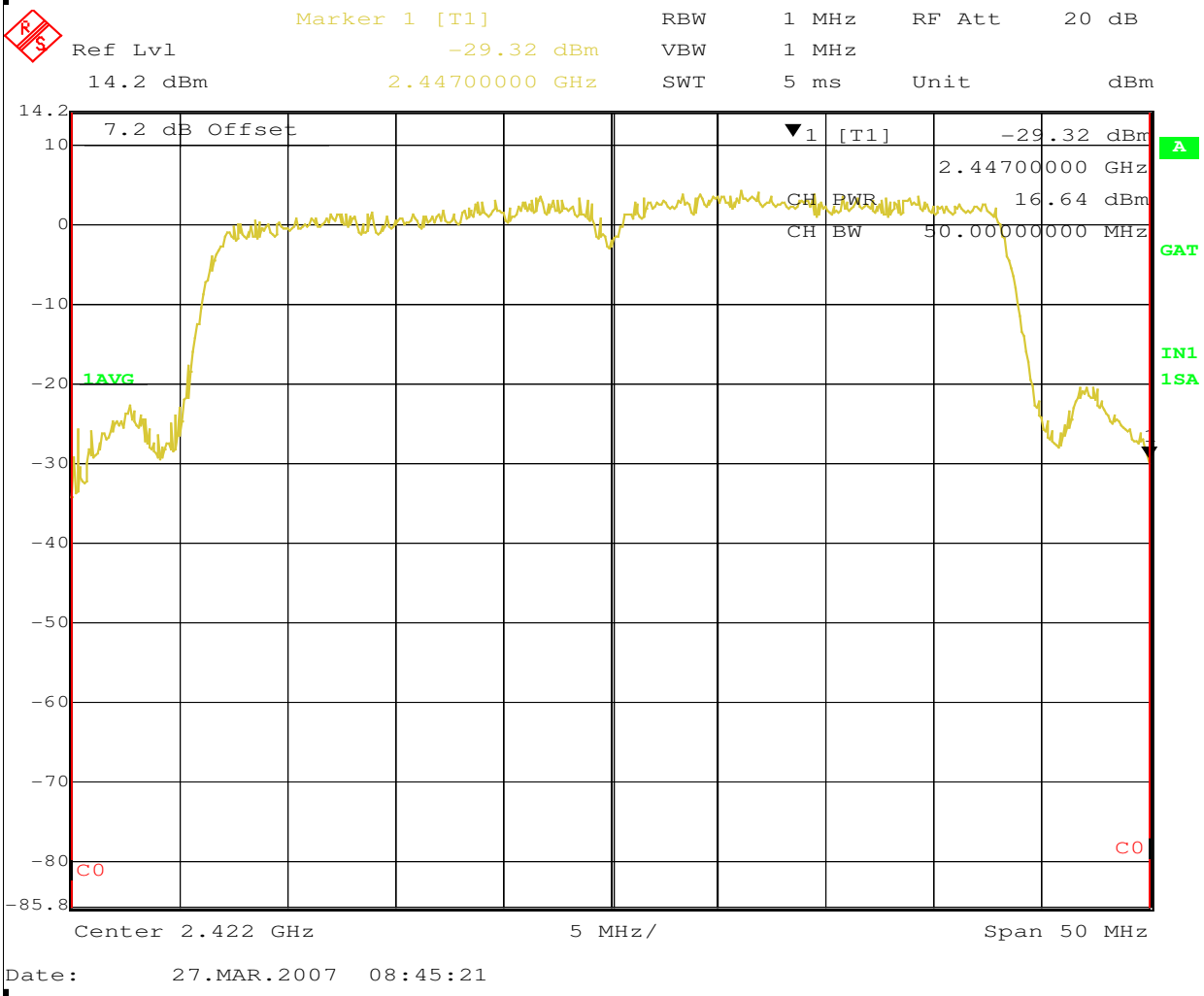
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Chain 1



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

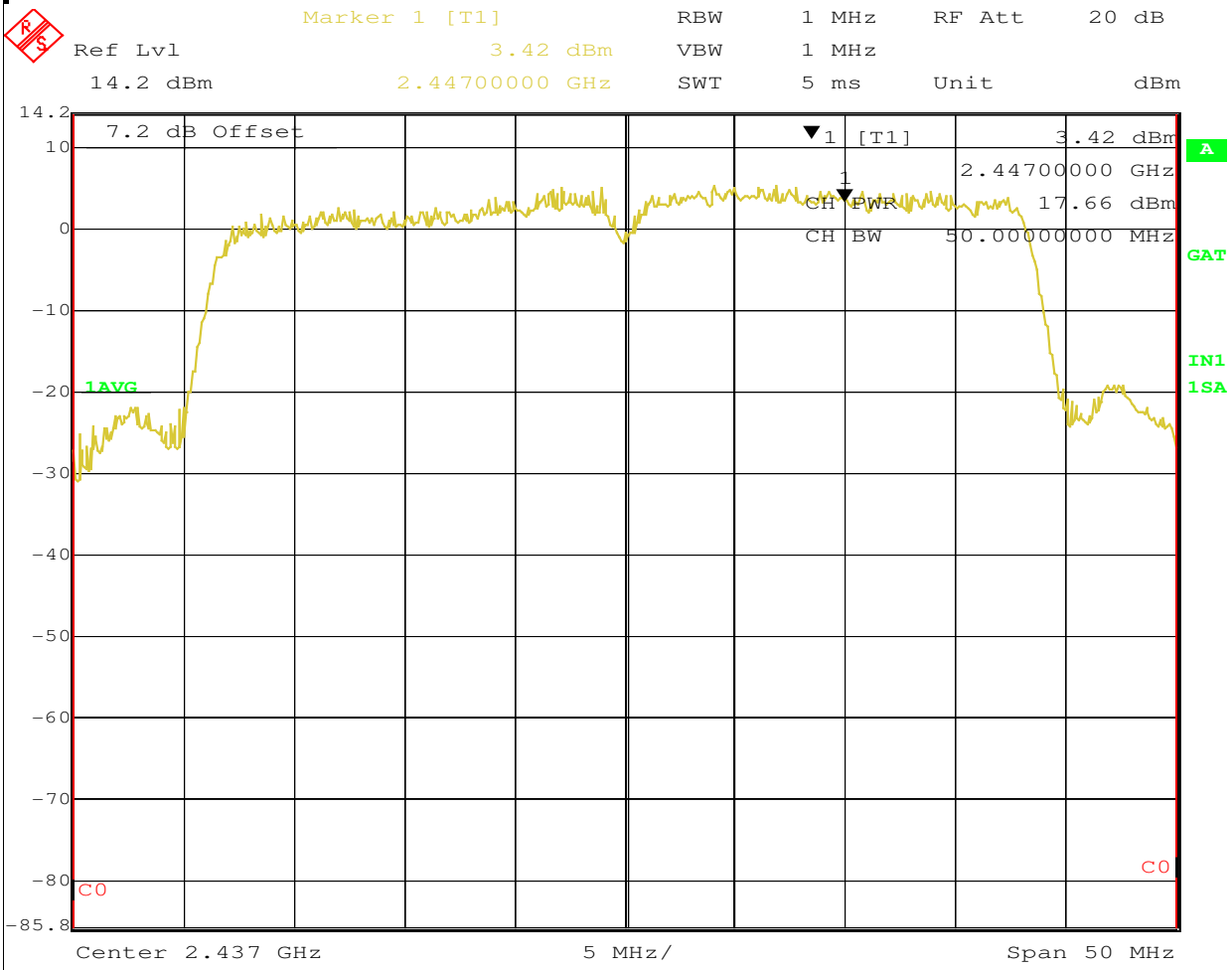
Chain 2



Elliott — EMC Test Data

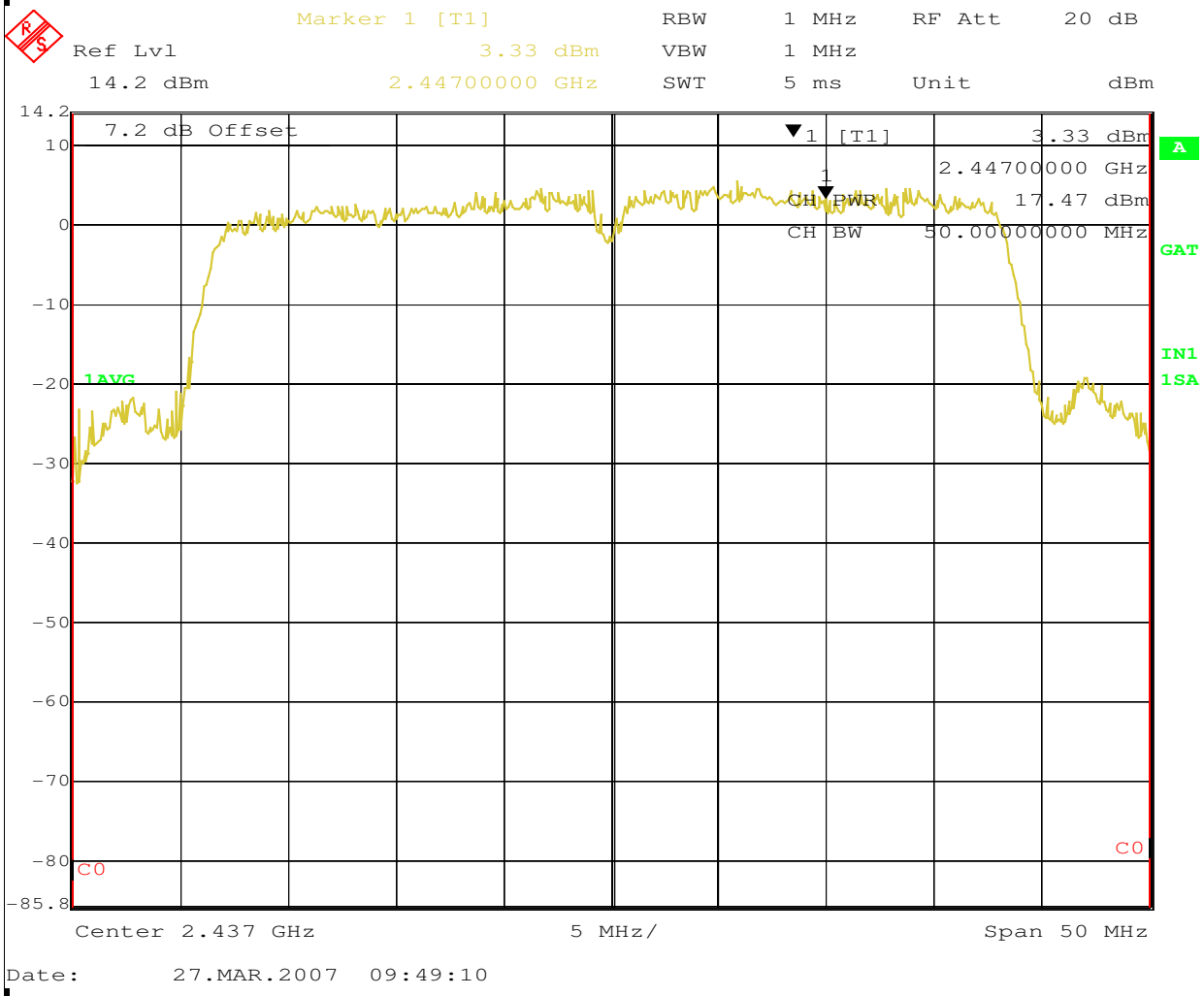
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Chain 1



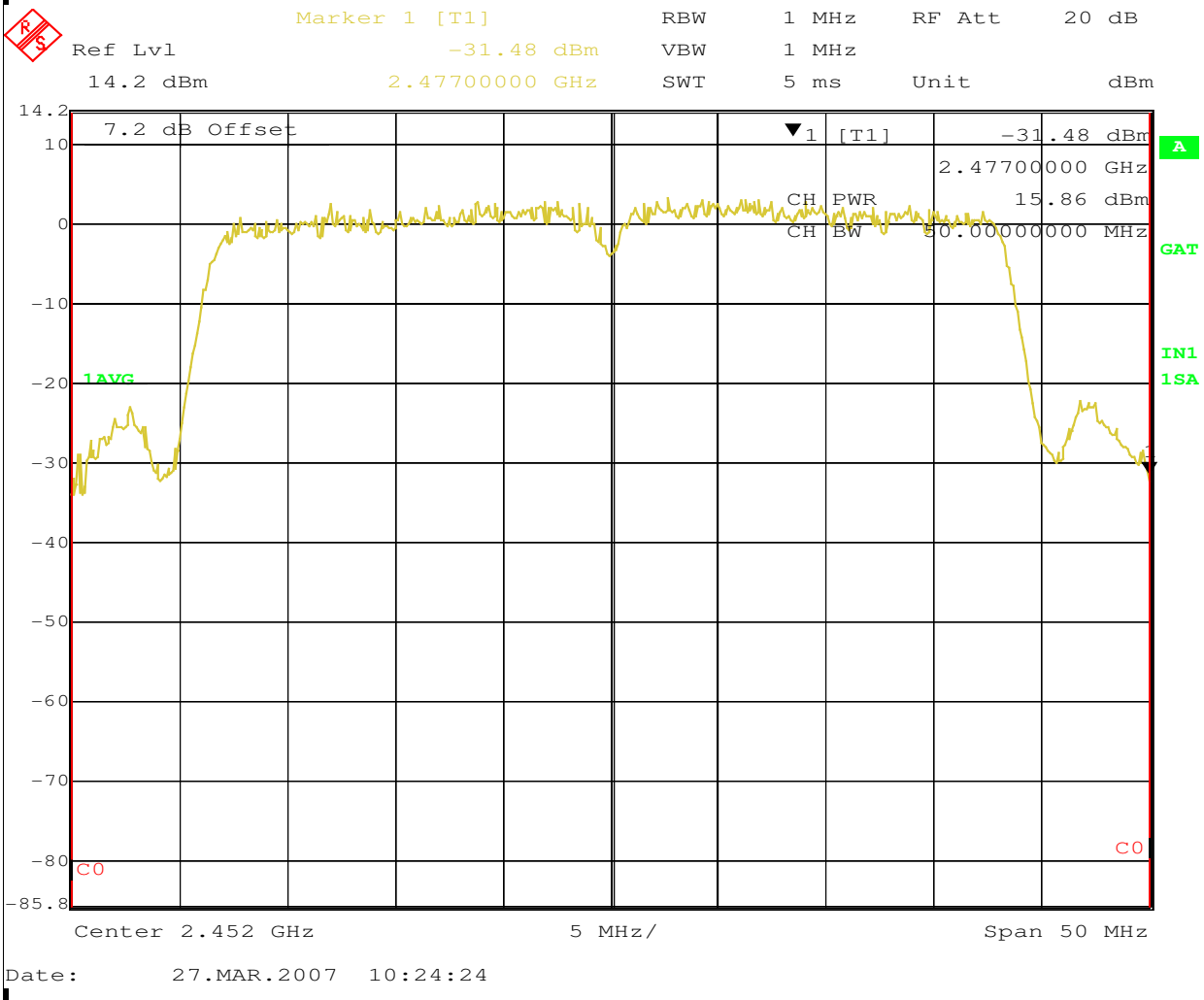
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Chain 2



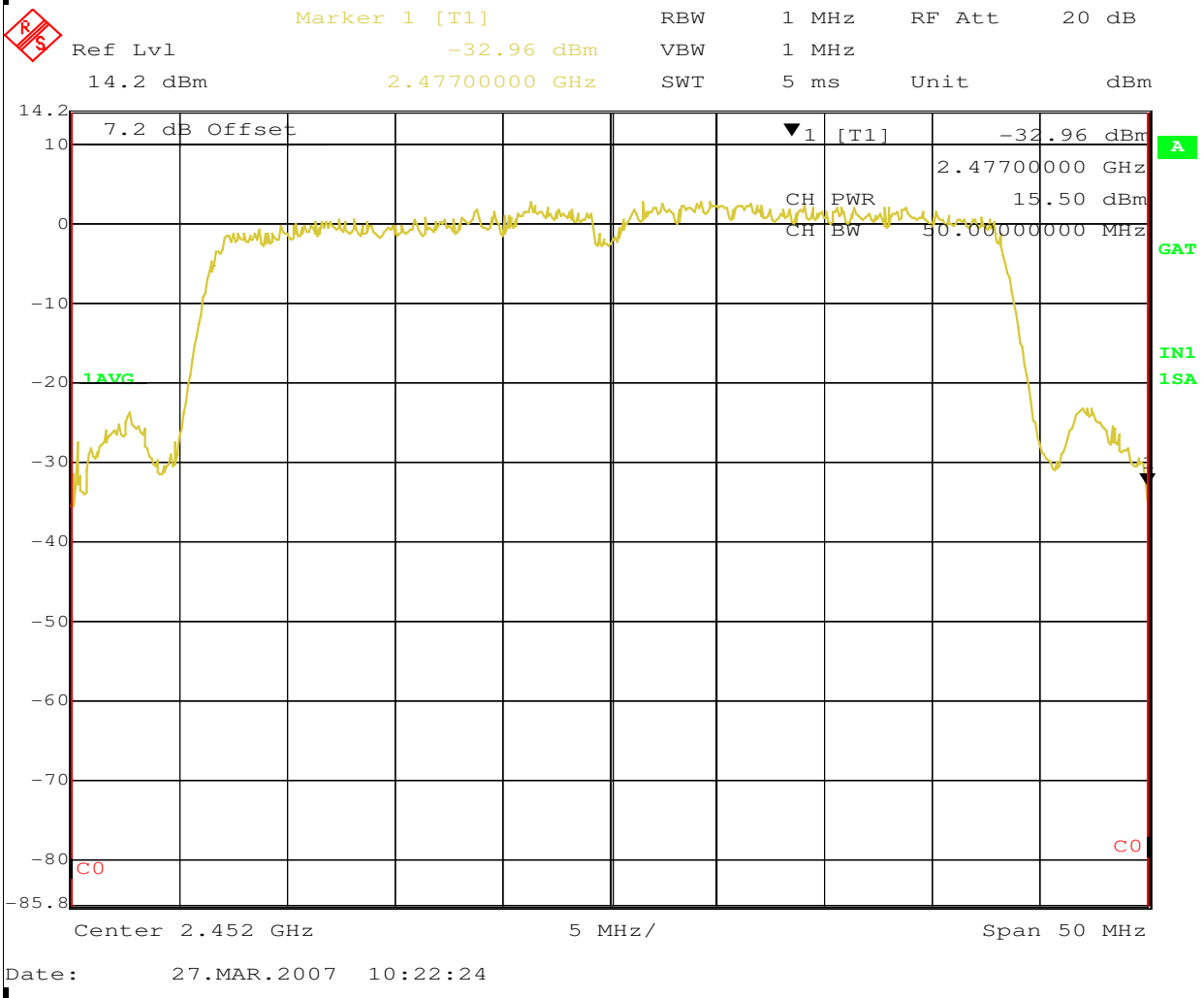
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Chain 1



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Chain 2

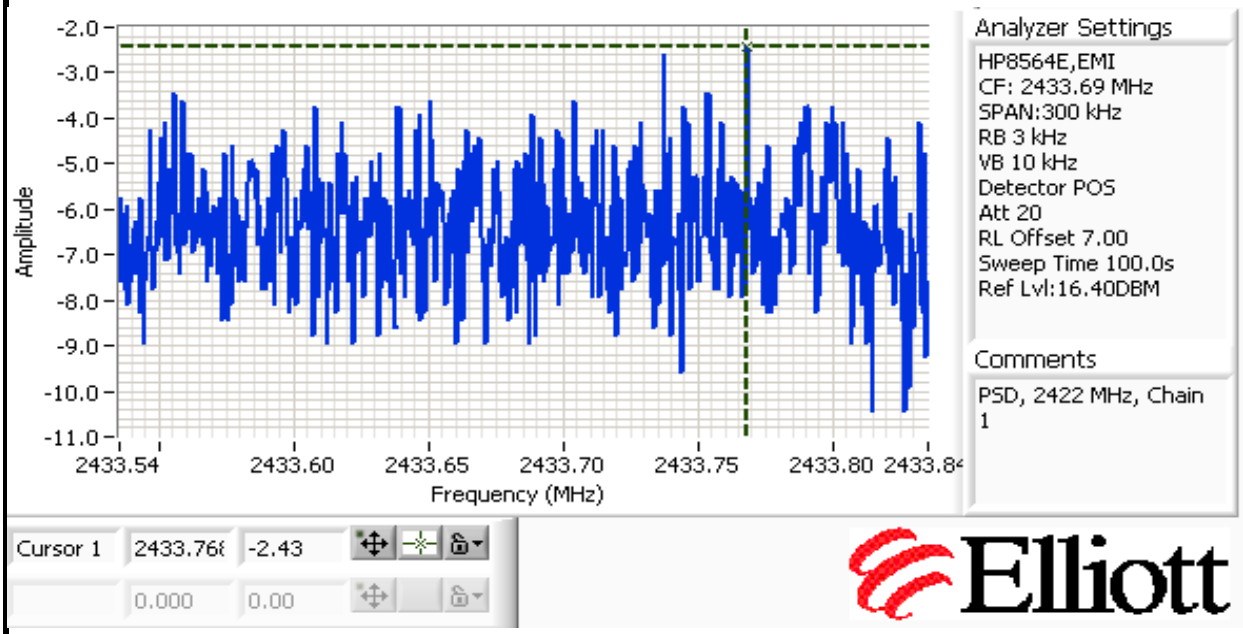


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

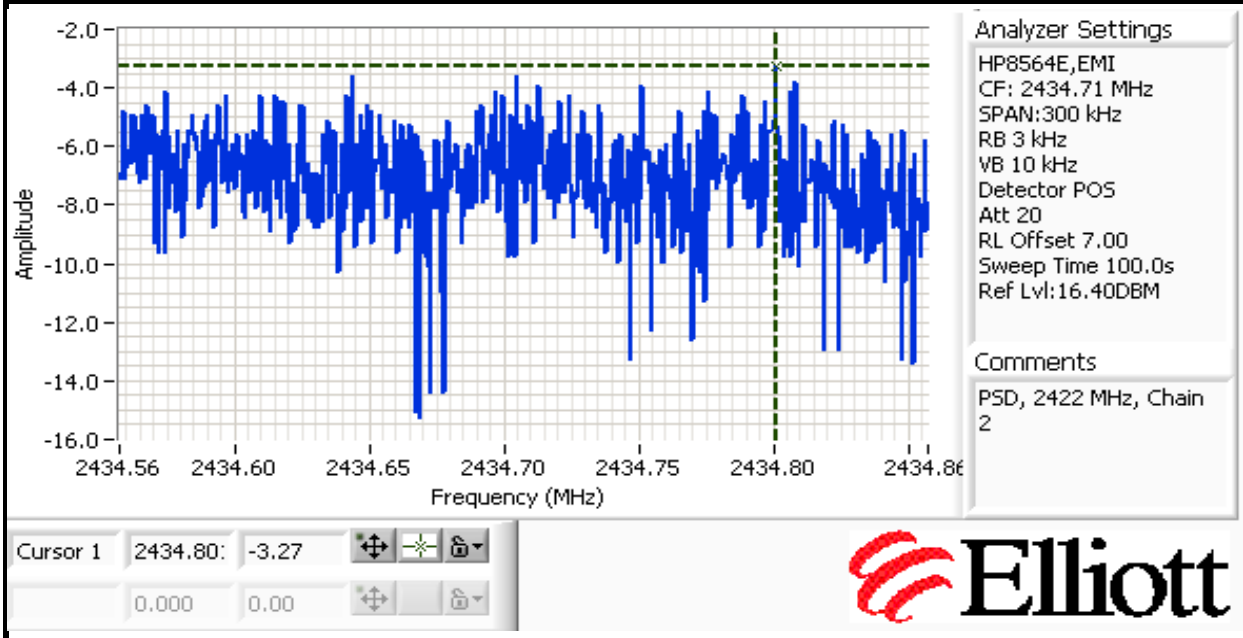
Run #2: Power spectral Density

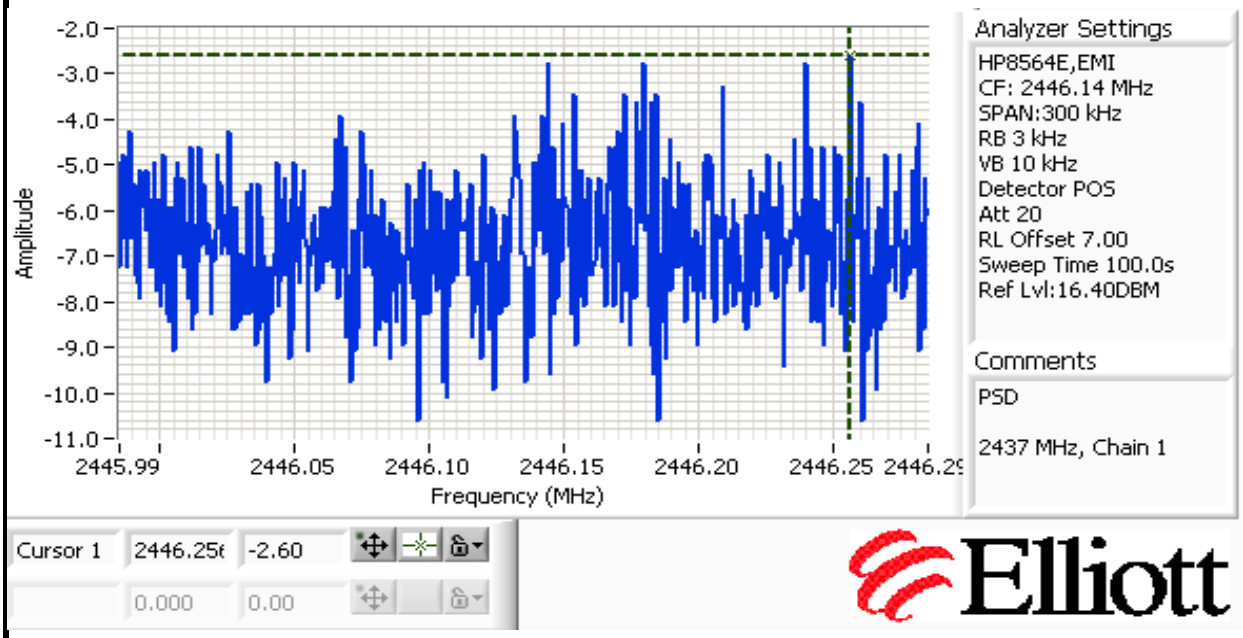
Power Setting	Frequency (MHz)	PSD (dBm/3kHz) Note 1 Chain 1	Chain 2	Total	Limit dBm/3kHz	Result
0x423E	2422	-2.4	-3.3	0.2	8.0	Pass
0x403C	2437	-2.6	-2.4	0.5	8.0	Pass
0x4A46	2452	-2.4	-1.6	1.0	8.0	Pass

Note 1:	Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.

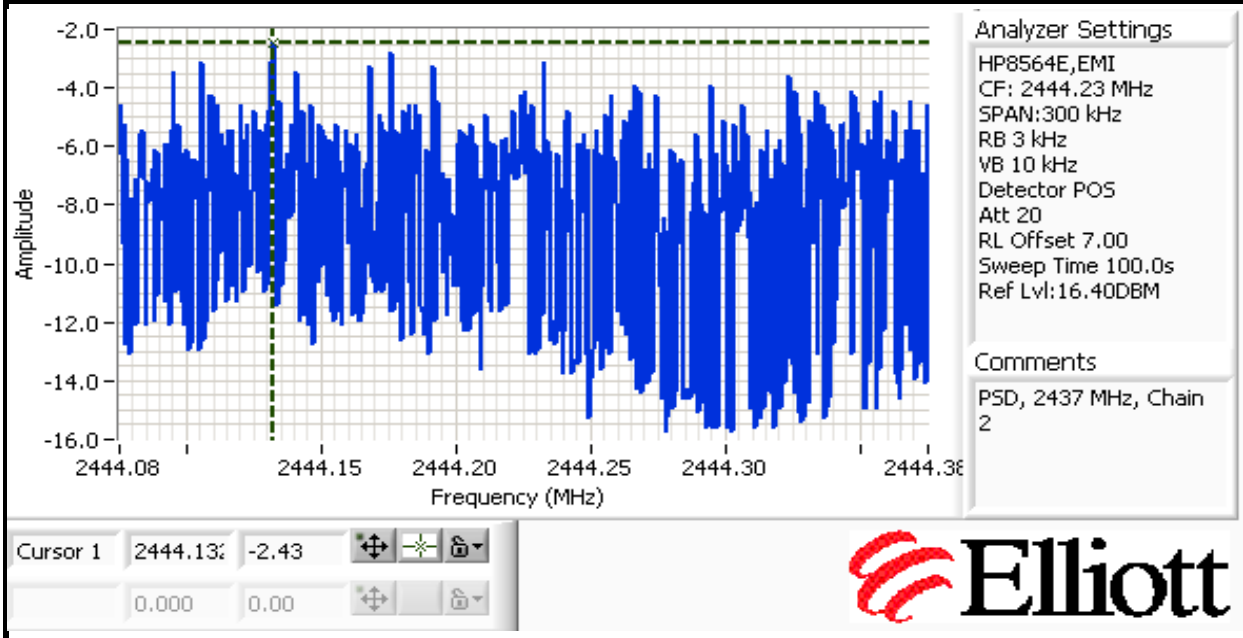


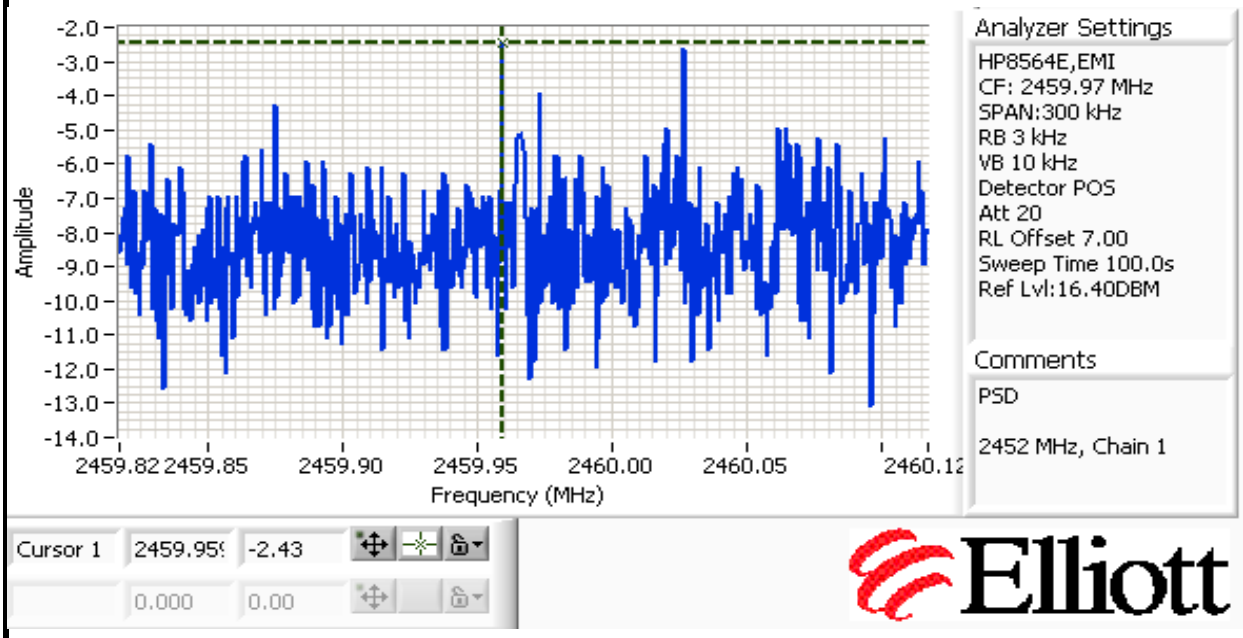
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



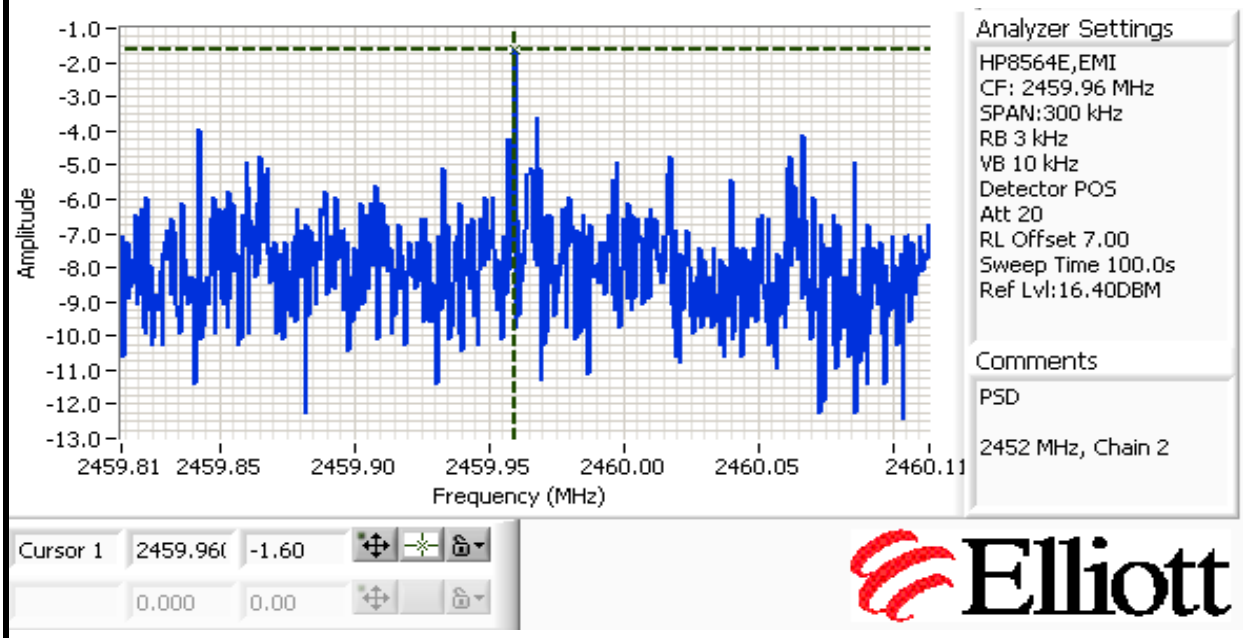


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A





Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

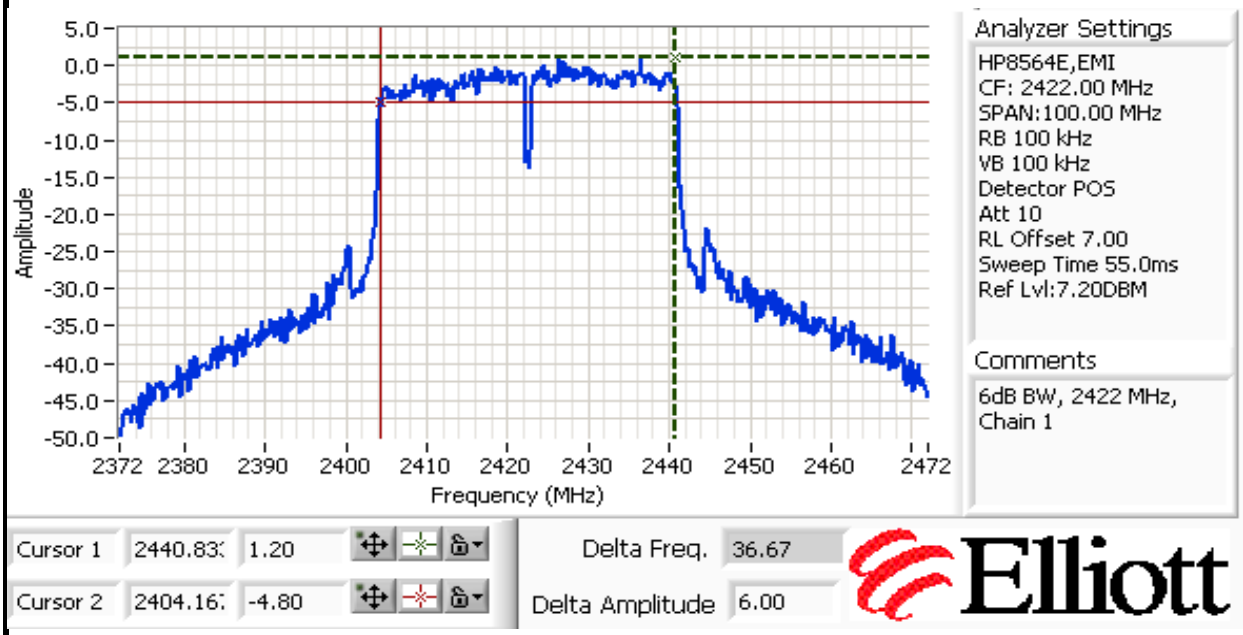


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

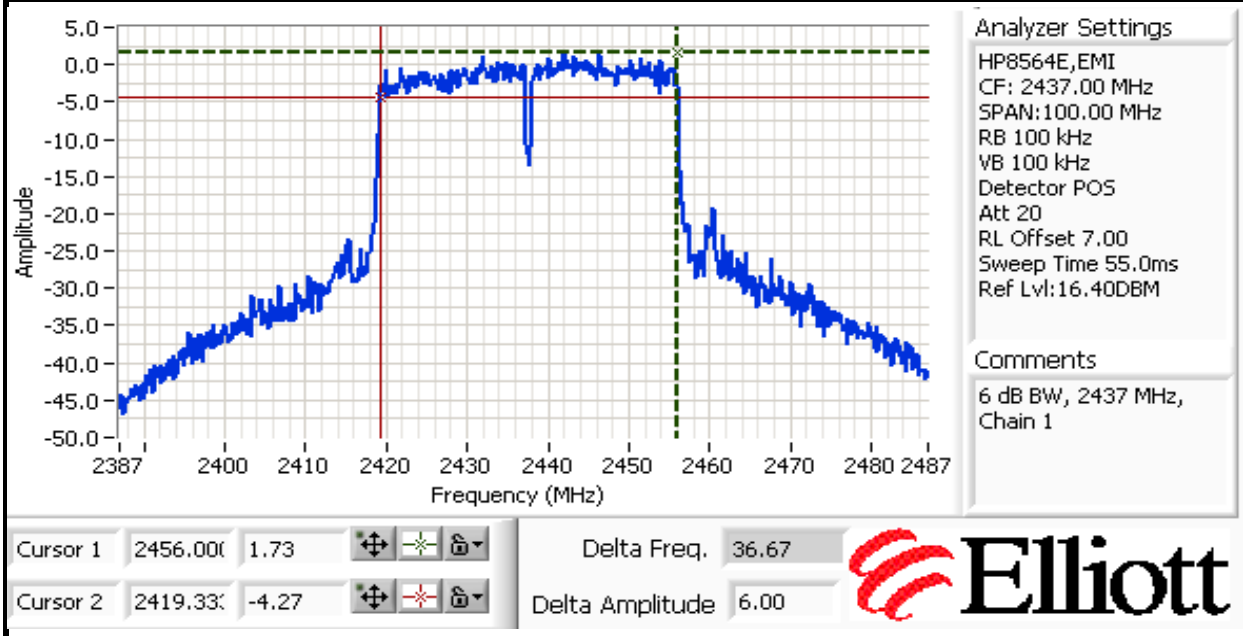
Run #3: Signal Bandwidth

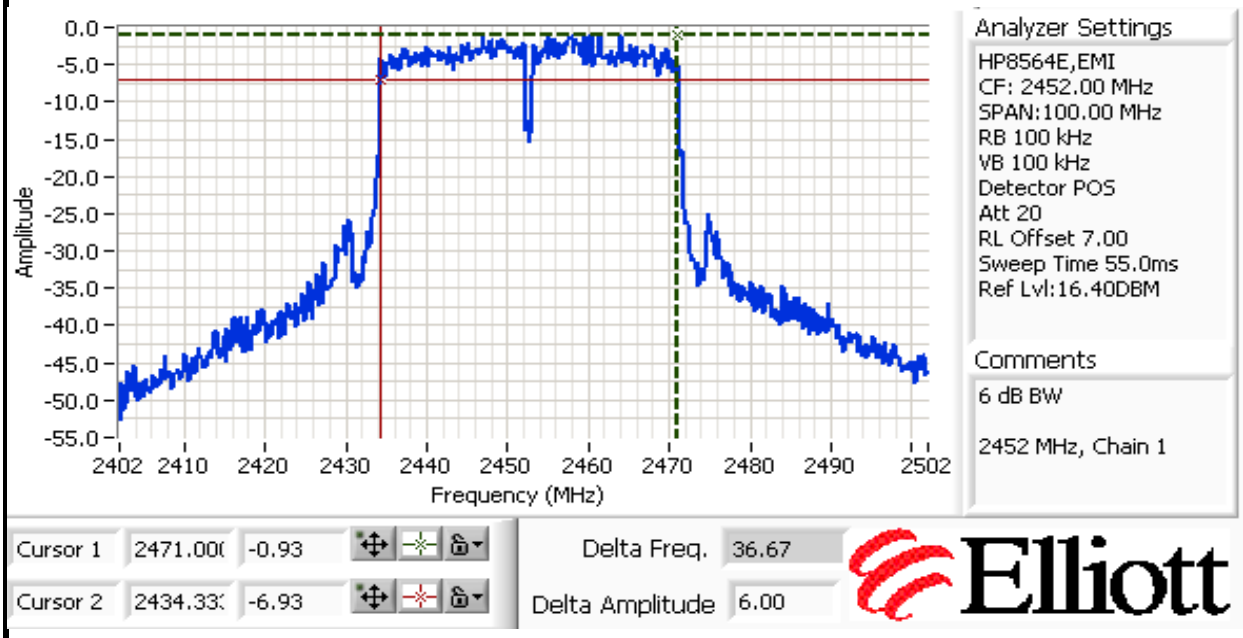
Power Setting	Frequency (MHz)	Resolution Bandwidth	Bandwidth (MHz) 6dB	99%
0x423E	2422	100kHz	36.7	37.1
0x403C	2437	100kHz	36.7	37.1
0x4A46	2452	100kHz	36.7	37.1

Note 1:	Measured on a single chain (Chain 1)
Note 2:	99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB

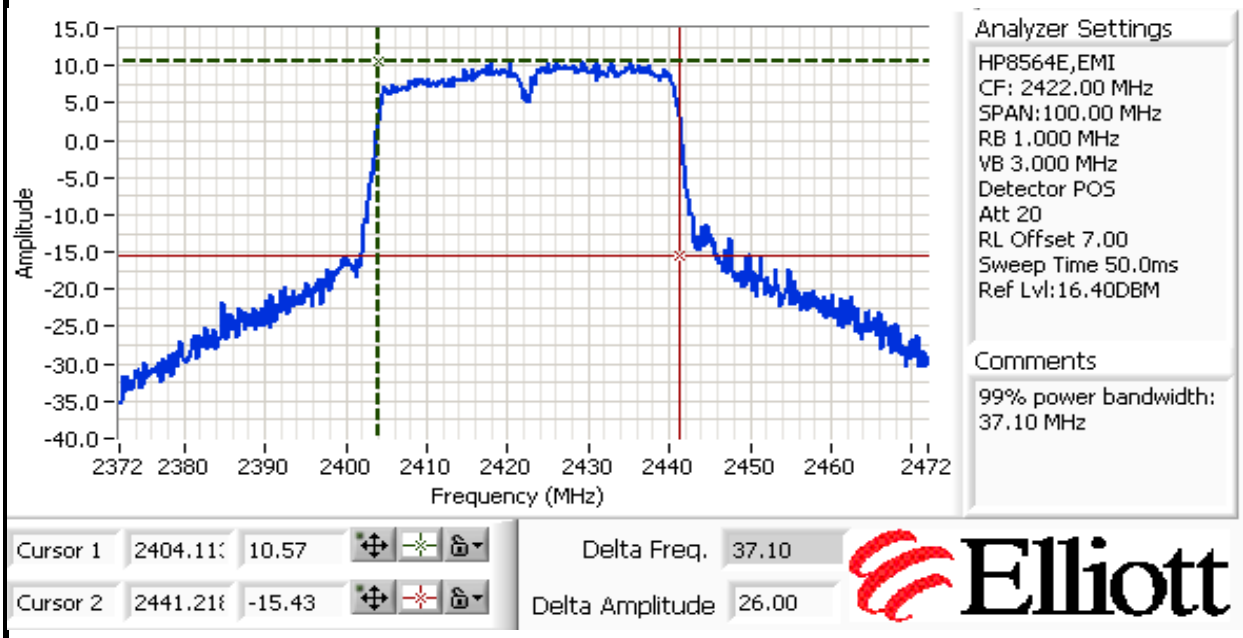


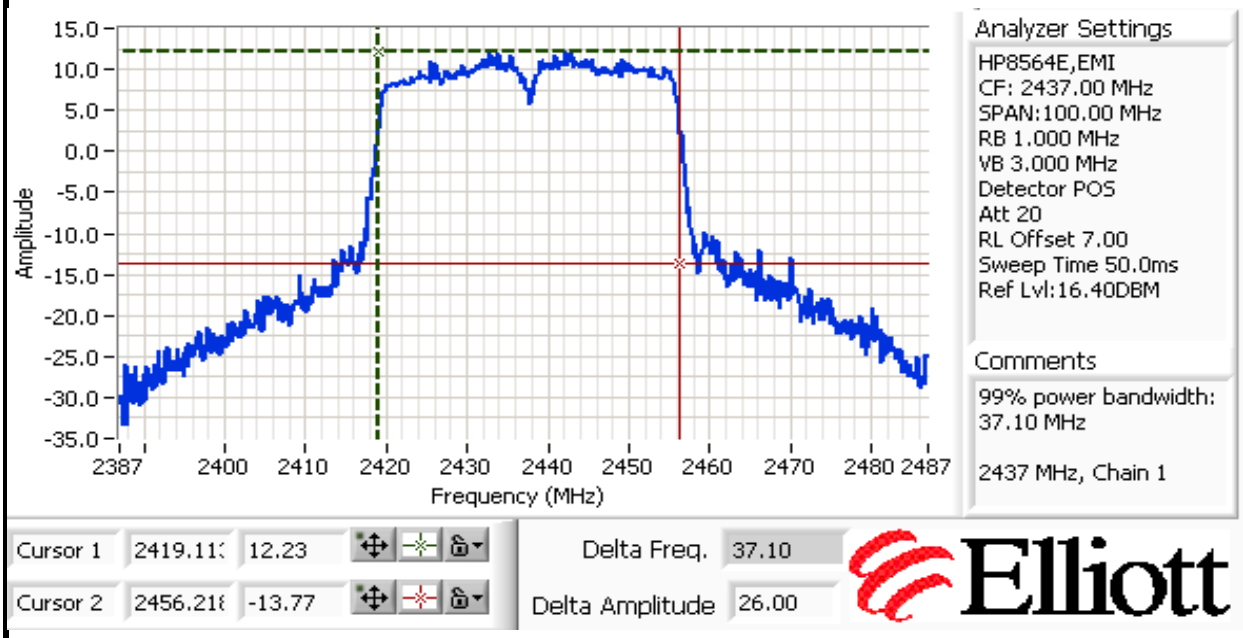
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



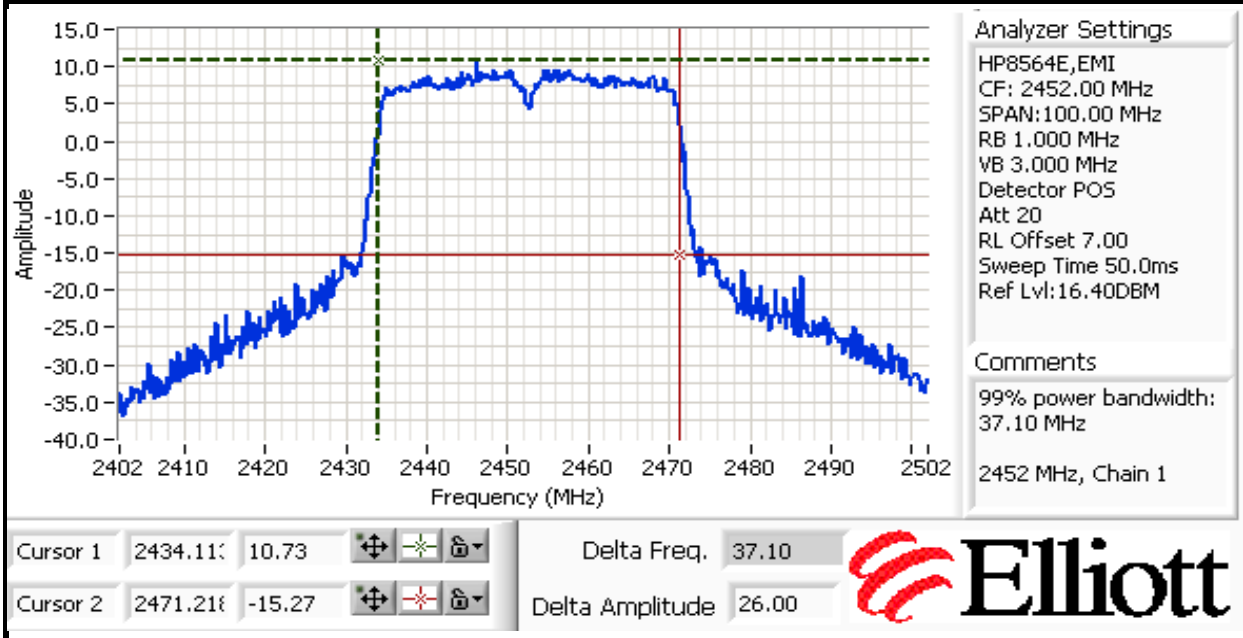


Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A





Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



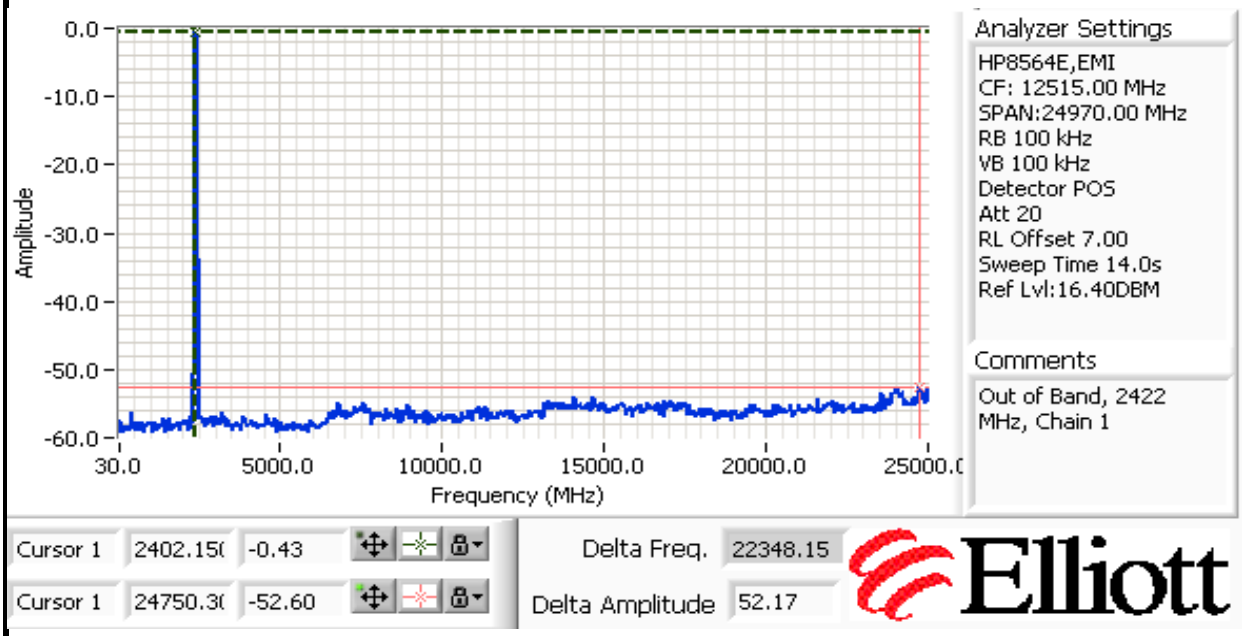
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #4: Out of Band Spurious Emissions

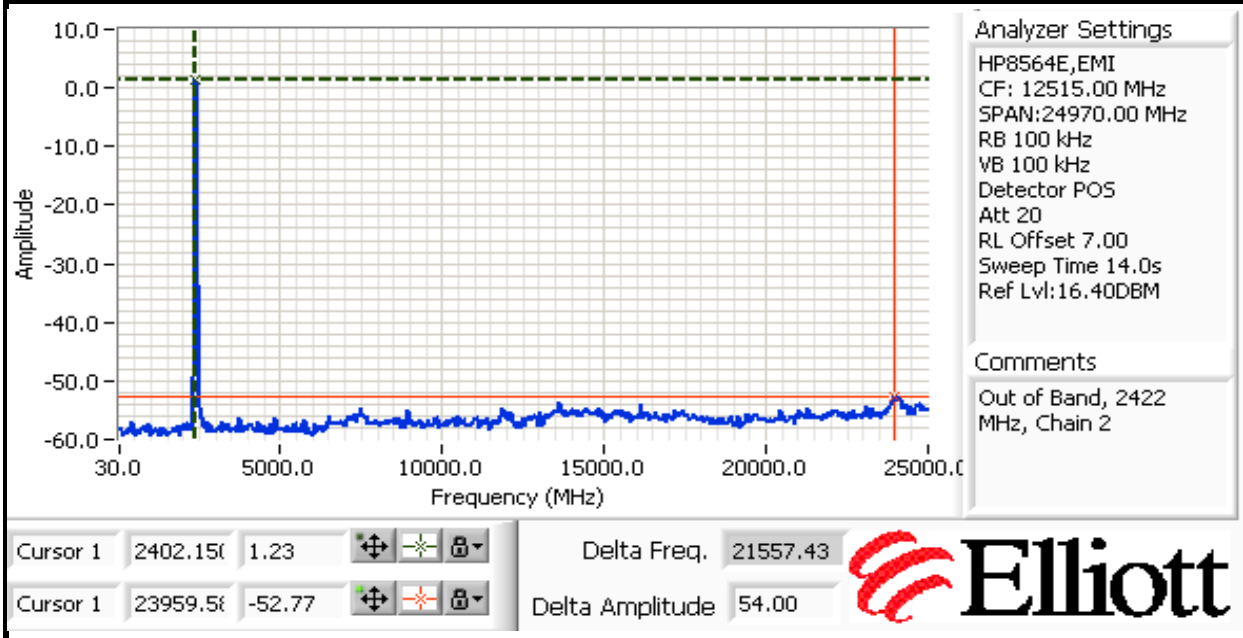
Power Setting Per Chain #1	#2	#3	Frequency (MHz)	Limit	Result
0x423E			2422	-30dBc	-52.2 dBc @ 22.348 GHz
0x403C			2437	-30dBc	-54.3 dBc @ 21.599 GHz
0x4A46			2452	-30dBc	-51.7 dBc @ 21.682 GHz

Note 1:	Measured with all chains connected together through a combiner, unused ports on the combiner terminated in 50ohms.
Note 1:	Measured on each chain individually

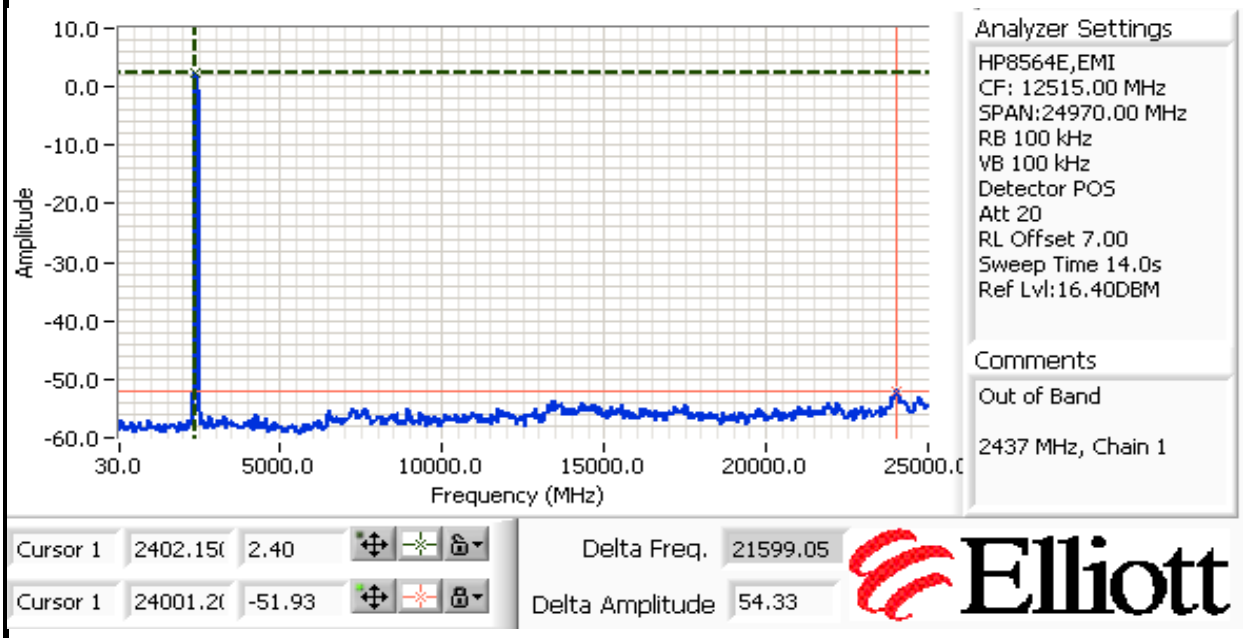
Plots for low channel, power setting(s) = 0x423E



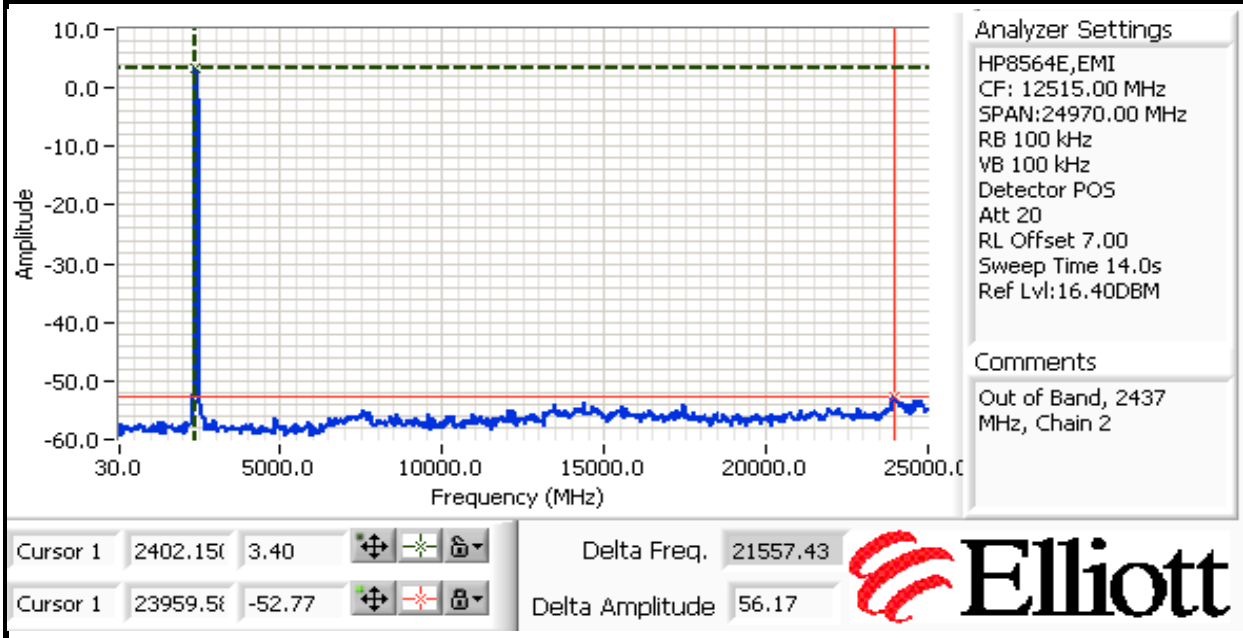
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



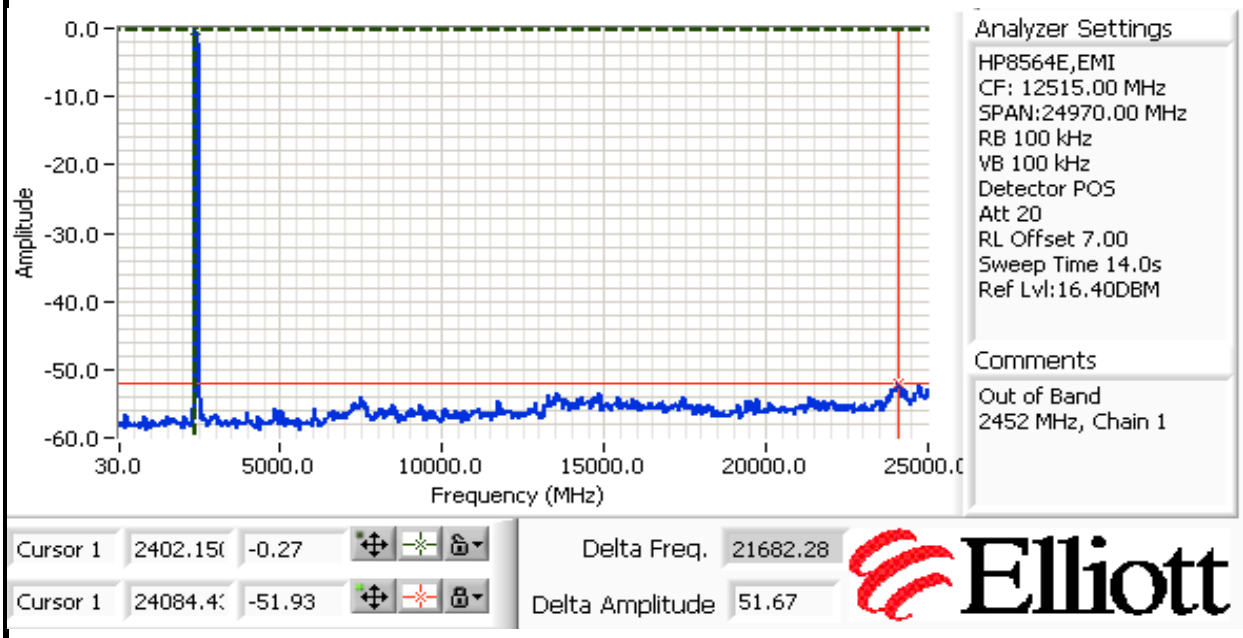
Plots for center channel, power setting(s) = 0x403C



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

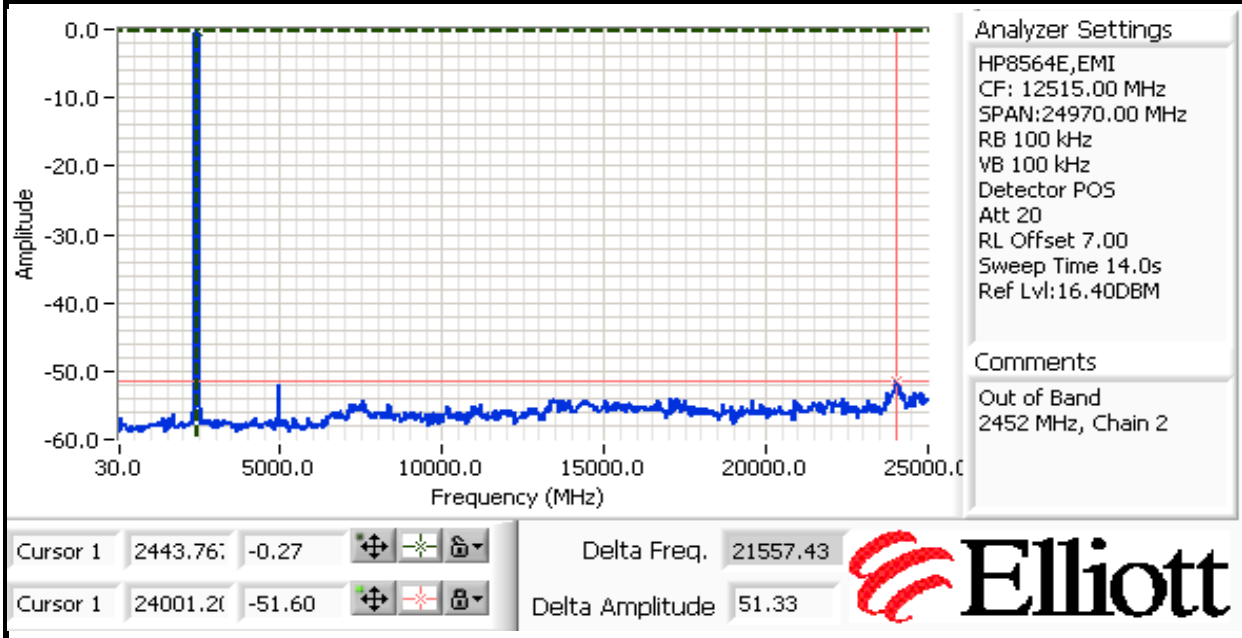


Plots for high channel



EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

RSS 210 and FCC 15.247 Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 3/20/2007
Test Engineer: Rafael Varelas
Test Location: Fremont Chamber #3
Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 20.6 °C
Rel. Humidity: 45 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1 (802.11n Mode) 20MHz CDD MCS0	RE, 30 - 18000 MHz - Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	49.9dBµV/m (312.6µV/m) @ 3453.3MHz (-4.1dB)

Modifications Made During Testing:

No modifications were made to the EUT during testing

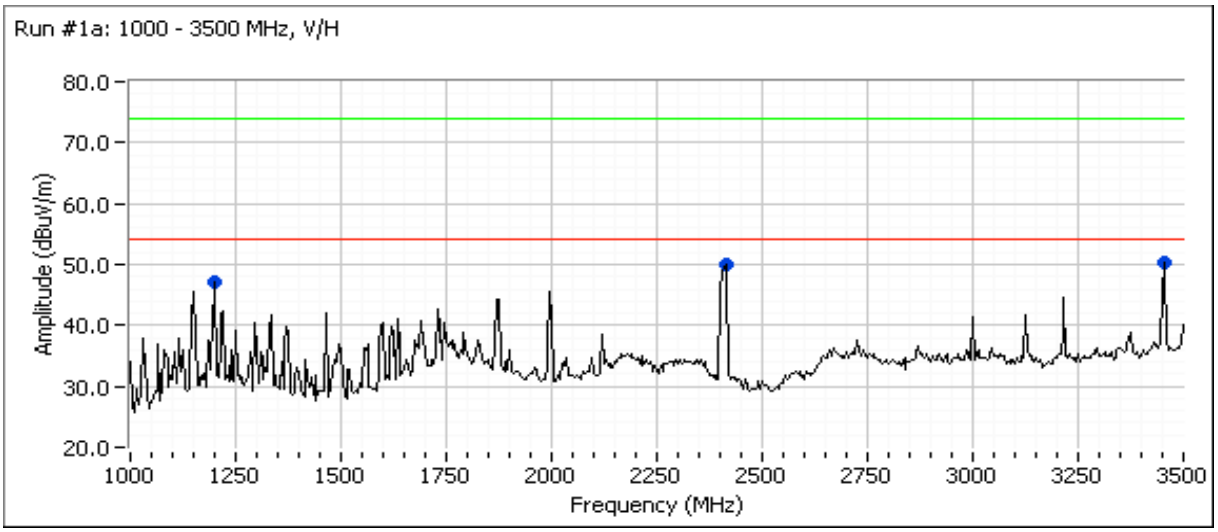
Deviations From The Standard

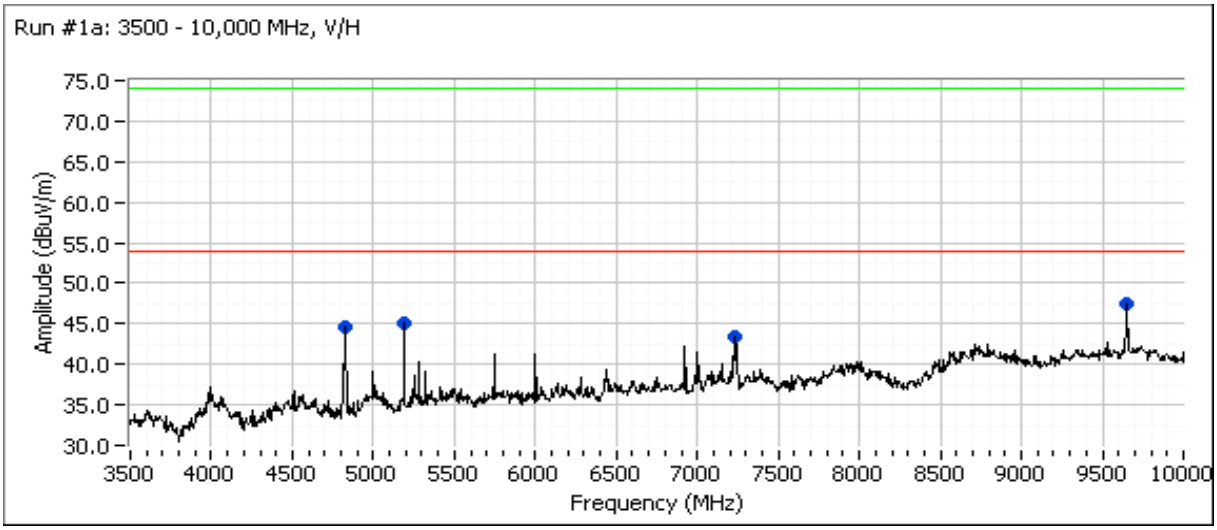
No deviations were made from the requirements of the standard.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1: Radiated Spurious Emissions, 30 - 18000 MHz. Operating Mode: 802.11n

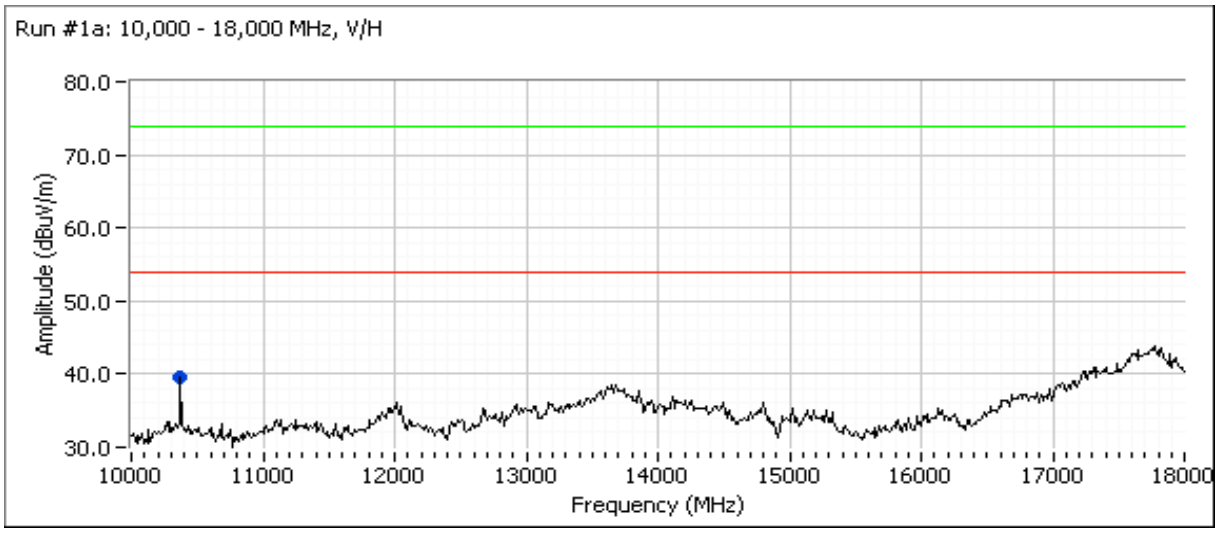
Run #1a: Low Channel 1 @ 2412 MHz





Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1a: Continued



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2411.290	50.0	V	54.0	-4.0	Peak	128	1.3	Non-restricted
3453.380	50.2	H	54.0	-3.8	Peak	126	1.7	Non-restricted
1200.000	47.2	H	54.0	-6.8	Peak	303	1.4	
4823.980	44.6	V	54.0	-9.4	Peak	56	1.3	
5190.000	45.1	V	54.0	-8.9	Peak	265	1.6	Non-restricted
7235.000	43.5	V	54.0	-10.5	Peak	76	1.3	Non-restricted
9650.000	47.4	V	54.0	-6.6	Peak	358	1.9	Non-restricted
10373.33	39.6	V	54.0	-14.4	Peak	231	1.3	Non-restricted

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

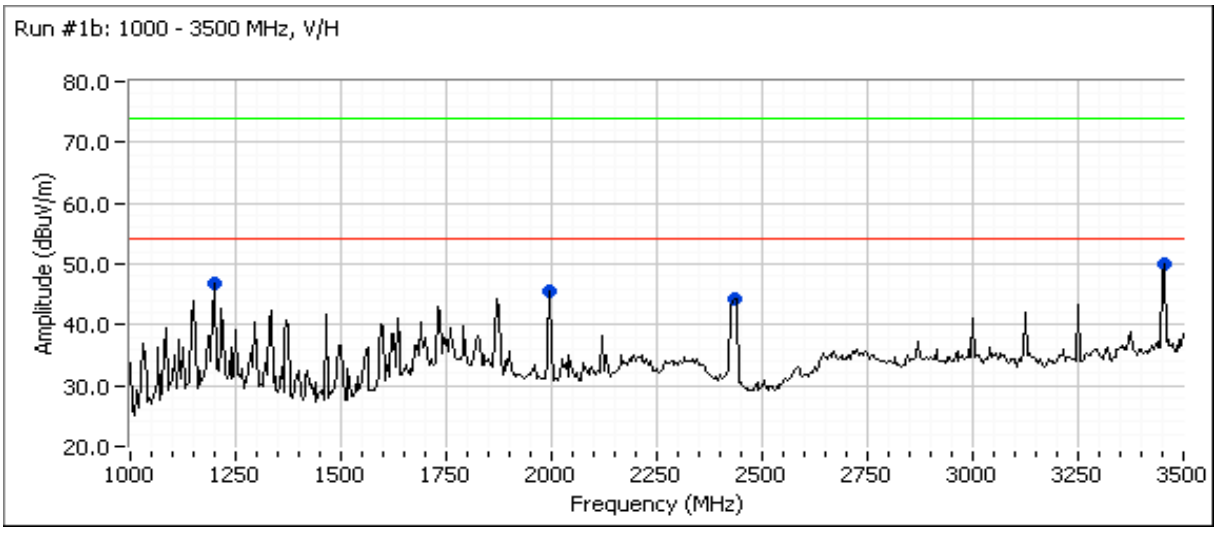
Run #1a: Continued

Maximized Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2410.680	43.5	V	54.0	-10.5	AVG	128	1.3	Non-restricted
2410.680	52.4	V	74.0	-21.6	PK	128	1.3	Non-restricted
3453.220	49.3	H	54.0	-4.7	AVG	123	1.7	Non-restricted
3453.220	51.9	H	74.0	-22.1	PK	123	1.7	Non-restricted
4823.770	41.7	V	54.0	-12.3	AVG	57	1.3	
4823.770	50.5	V	74.0	-23.5	PK	57	1.3	

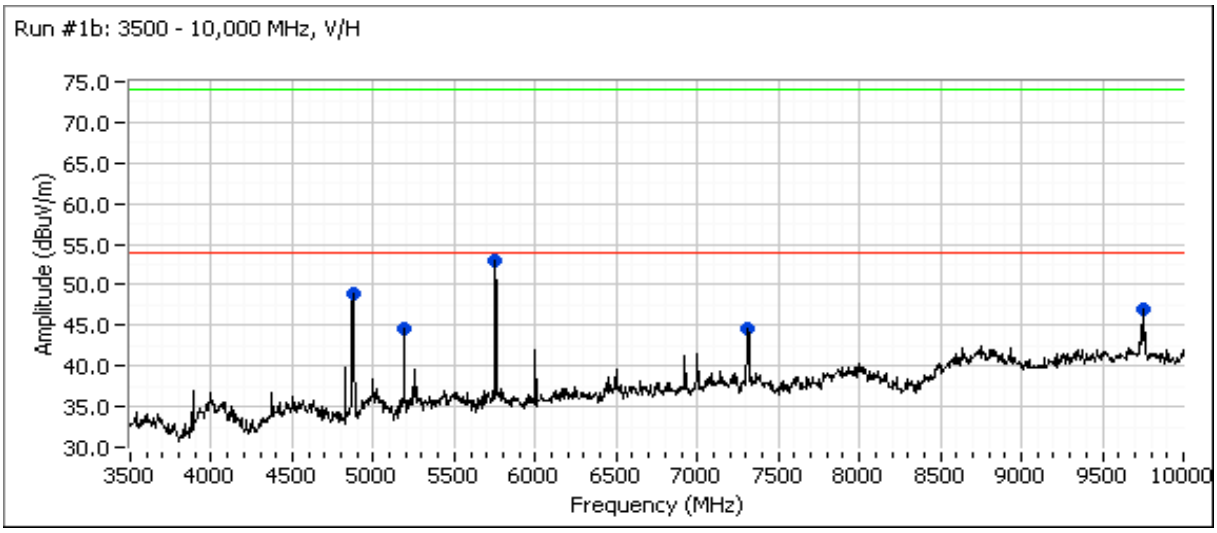
Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	Signal is not in a restricted band but the more stringent restricted band limit was used.

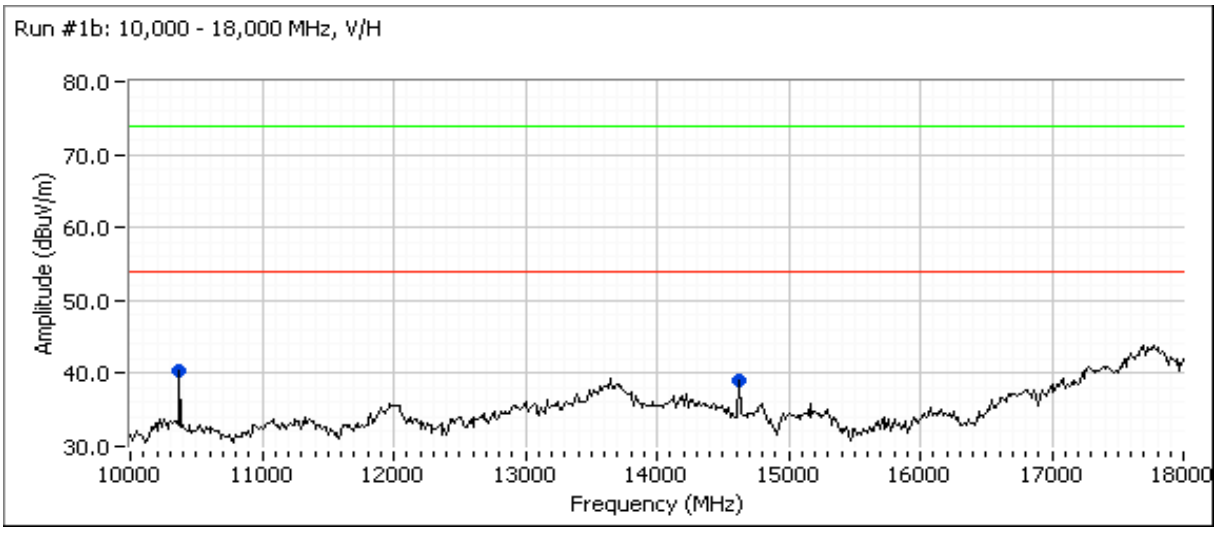
Run #1b: Center Channel 6 @ 2437 MHz



Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1b: Continued





Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1b: Continued

Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.340	50.1	H	54.0	-3.9	Peak	142	1.4	Non-restricted
1200.000	46.7	H	54.0	-7.3	Peak	266	2.0	
1995.830	45.6	V	54.0	-8.4	Peak	285	1.3	
2433.330	44.4	V	54.0	-9.6	Peak	89	1.3	
4874.000	49.0	V	54.0	-5.0	Peak	48	1.6	
5750.000	53.0	H	54.0	-1.0	Peak	117	1.7	Non-restricted
5190.000	44.7	V	54.0	-9.3	Peak	257	1.6	Non-restricted
7310.830	44.7	V	54.0	-9.3	Peak	72	1.0	
9749.170	47.1	V	54.0	-6.9	Peak	321	1.9	Non-restricted
10373.33	40.3	V	54.0	-13.7	Peak	240	1.6	Non-restricted
14626.67	39.0	V	54.0	-15.0	Peak	27	1.6	Non-restricted

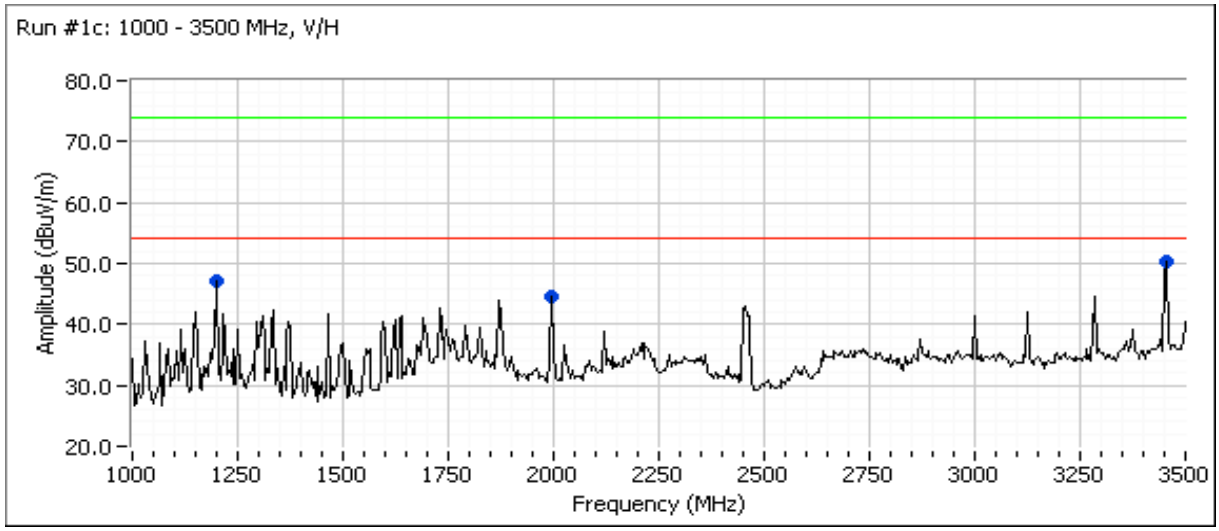
Maximized Readings

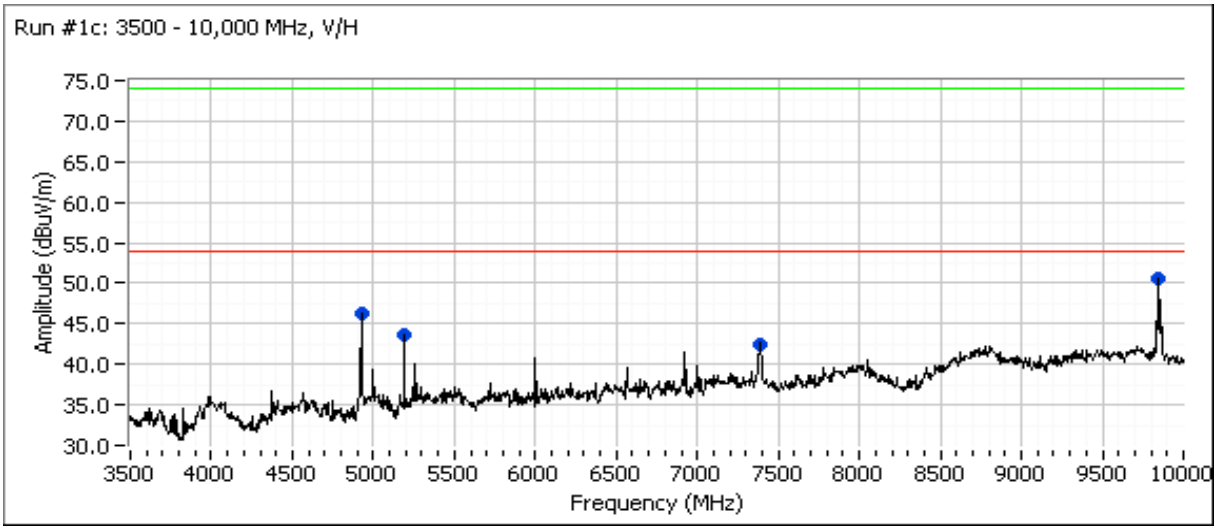
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.360	48.9	H	54.0	-5.1	AVG	141	1.4	Non-restricted
3453.360	51.4	H	74.0	-22.6	PK	141	1.4	Non-restricted
4873.960	46.7	V	54.0	-7.3	AVG	49	1.6	
4873.960	51.0	V	74.0	-23.0	PK	49	1.6	
5750.800	32.2	H	54.0	-21.8	AVG	297	1.0	Non-restricted, random spike
5750.800	43.0	H	74.0	-31.0	PK	297	1.0	Non-restricted, random spike

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

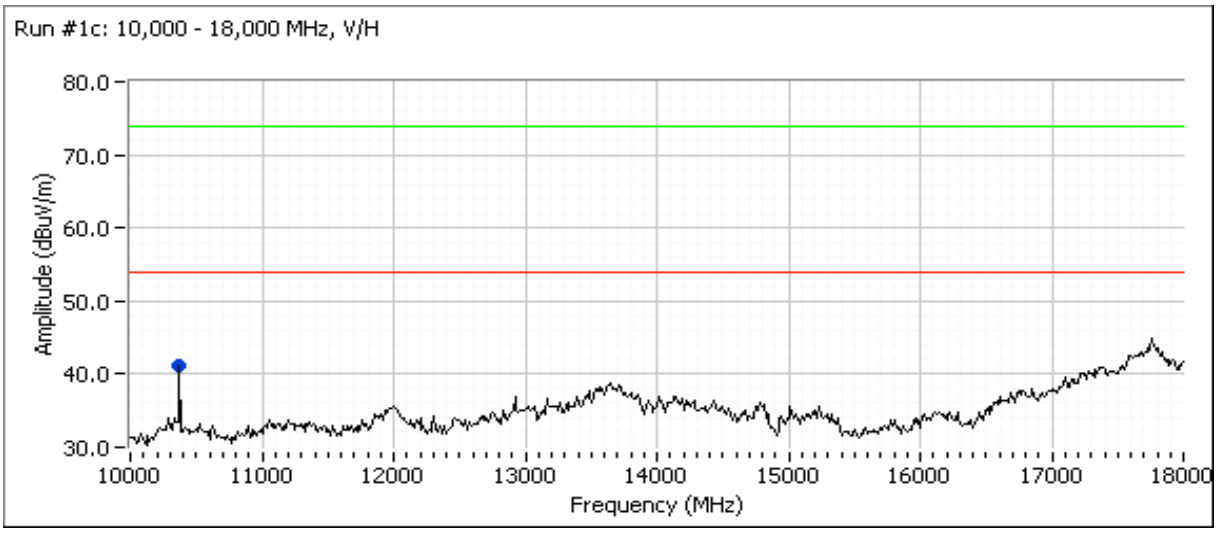
Run #1c: High Channel 11 @ 2462 MHz





Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1c: Continued



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.340	50.2	H	54.0	-3.8	Peak	126	1.4	Non-restricted
1200.000	47.0	H	54.0	-7.0	Peak	290	2.0	
1995.830	44.5	V	54.0	-9.5	Peak	282	1.3	
4923.980	46.2	V	54.0	-7.8	Peak	50	1.6	
5190.000	43.6	V	54.0	-10.4	Peak	255	1.6	Non-restricted
7386.670	42.4	V	54.0	-11.6	Peak	77	1.0	
9848.330	50.7	V	54.0	-3.3	Peak	108	1.0	Non-restricted
10373.33	41.1	V	54.0	-12.9	Peak	259	1.6	Non-restricted

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1c: Continued

Maximized Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.320	49.9	H	54.0	-4.1	AVG	126	1.4	Non-restricted
3453.320	52.8	H	74.0	-21.2	PK	126	1.4	Non-restricted
4923.800	44.7	V	54.0	-9.3	AVG	51	1.6	
4923.800	48.8	V	74.0	-25.2	PK	51	1.6	
9848.810	39.3	V	54.0	-14.7	AVG	297	1.0	Non-restricted
9848.810	54.2	V	74.0	-19.8	PK	297	1.0	Non-restricted

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

RSS 210 and FCC 15.247 Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 3/26/2007
Test Engineer: Rafael Varelas
Test Location: Fremont Chamber #3
Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 19.8 °C
Rel. Humidity: 43 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1 (802.11n Mode) 40MHz CDD MCS0	RE, 30 - 18000 MHz - Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	50.7dBµV/m (342.8µV/m) @ 3453.3MHz (-3.3dB)

Modifications Made During Testing:

No modifications were made to the EUT during testing

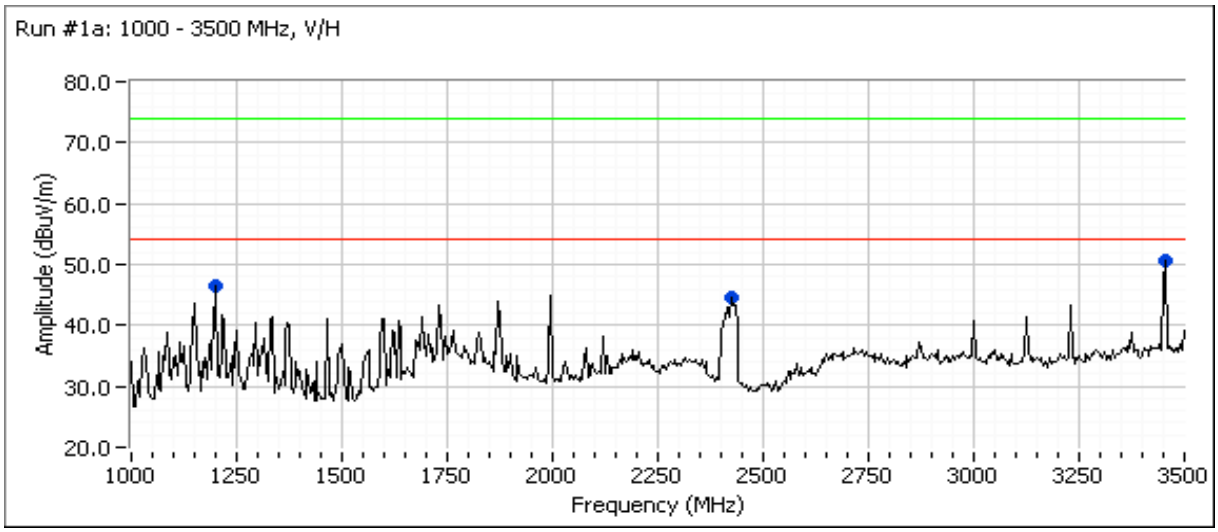
Deviations From The Standard

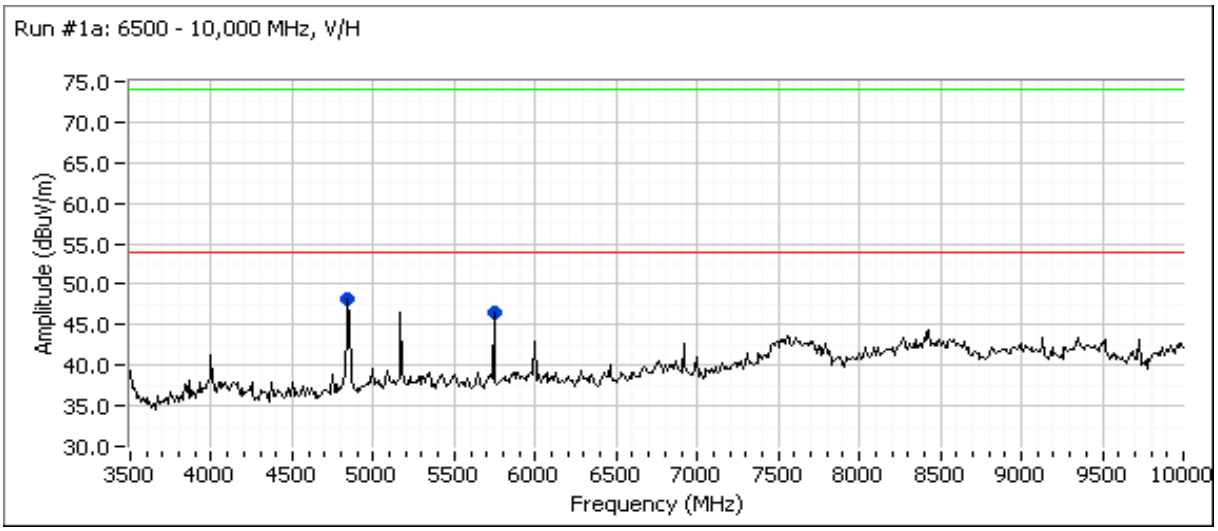
No deviations were made from the requirements of the standard.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1: Radiated Spurious Emissions, 30 - 18000 MHz. Operating Mode: 802.11n

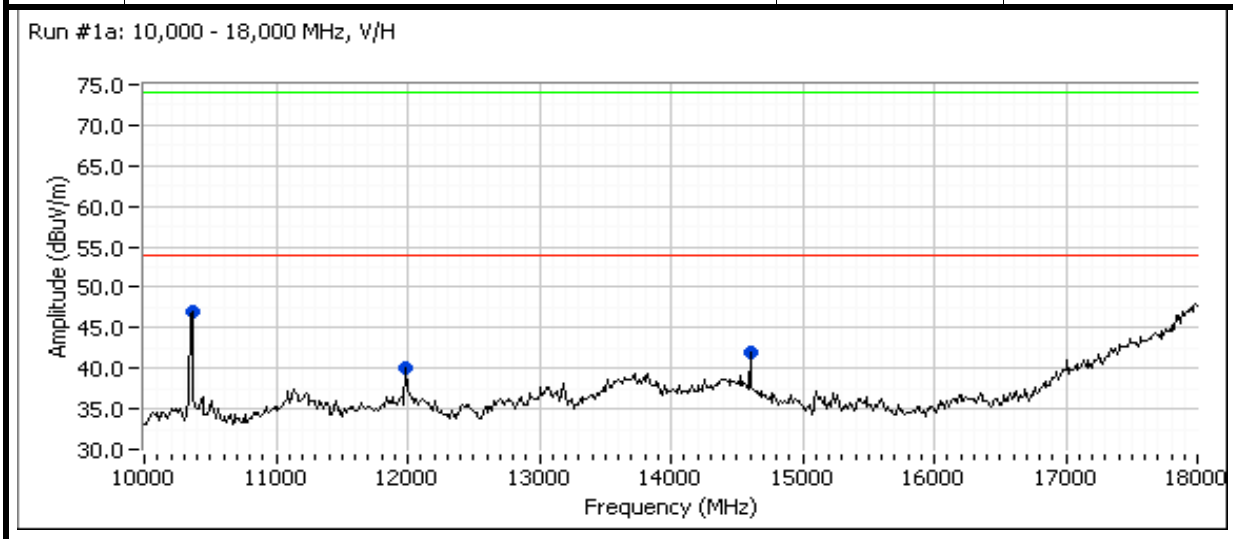
Run #1a: Low Channel 3 @ 2422 MHz





Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.380	50.6	H	54.0	-3.4	Peak	141	1.4	Non-restricted
1200.000	46.5	H	54.0	-7.5	Peak	269	2.0	Non-restricted
2425.000	44.6	V	54.0	-9.4	Peak	204	1.0	Non-restricted
4843.870	48.3	V	54.0	-5.7	Peak	252	2.0	
5742.500	46.5	H	54.0	-7.5	Peak	102	1.1	Non-restricted
10360.00	47.0	H	54.0	-7.0	Peak	120	1.0	
11986.67	40.1	H	54.0	-13.9	Peak	73	1.0	
14600.00	42.0	V	54.0	-12.0	Peak	228	1.0	

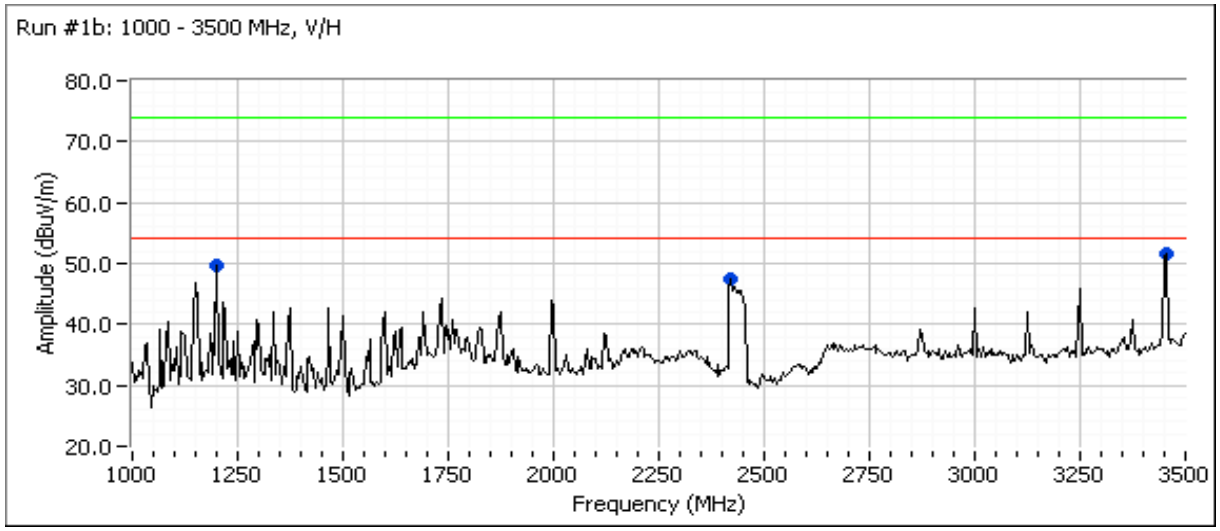
Maximized Readings

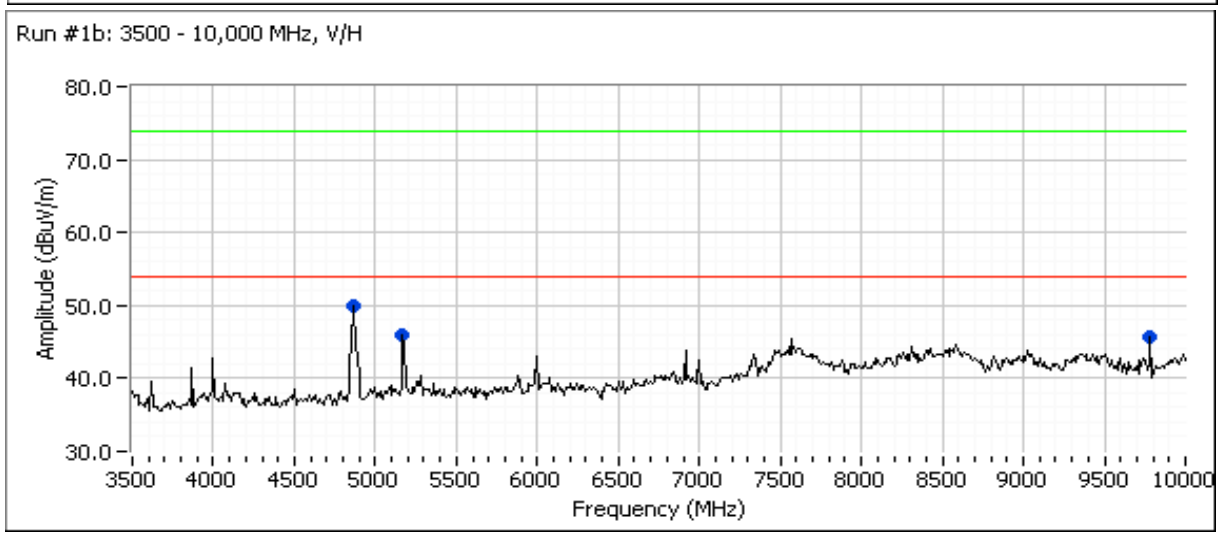
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.370	49.4	H	54.0	-4.6	AVG	141	1.4	Non-restricted
3453.370	52.0	H	74.0	-22.0	PK	141	1.4	Non-restricted
4843.870	45.0	V	54.0	-9.0	AVG	252	1.9	
4843.870	50.2	V	74.0	-23.8	PK	252	1.9	

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

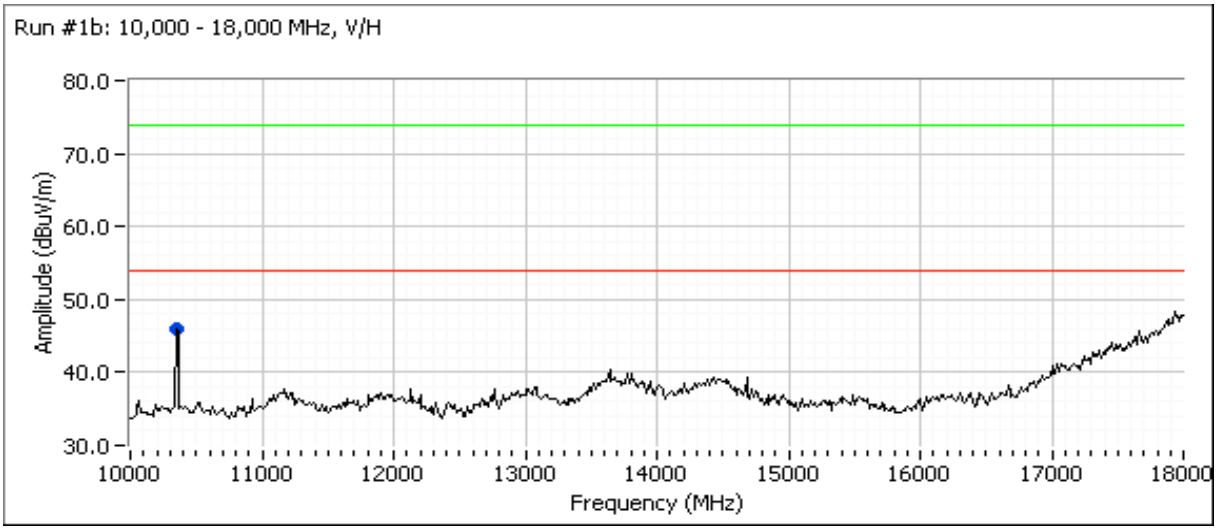
Run #1b: Center Channel 6 @ 2437 MHz





Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1200.000	49.8	H	54.0	-4.2	Peak	294	2.0	
3453.340	51.6	H	54.0	-2.4	Peak	111	2.0	
2420.250	47.3	V	54.0	-6.7	Peak	288	1.0	
4873.830	49.9	V	54.0	-4.1	Peak	254	1.9	
5168.330	46.0	V	54.0	-8.0	Peak	102	1.0	
9783.330	45.7	V	54.0	-8.3	Peak	74	1.9	
10346.67	45.9	H	54.0	-8.1	Peak	120	1.0	

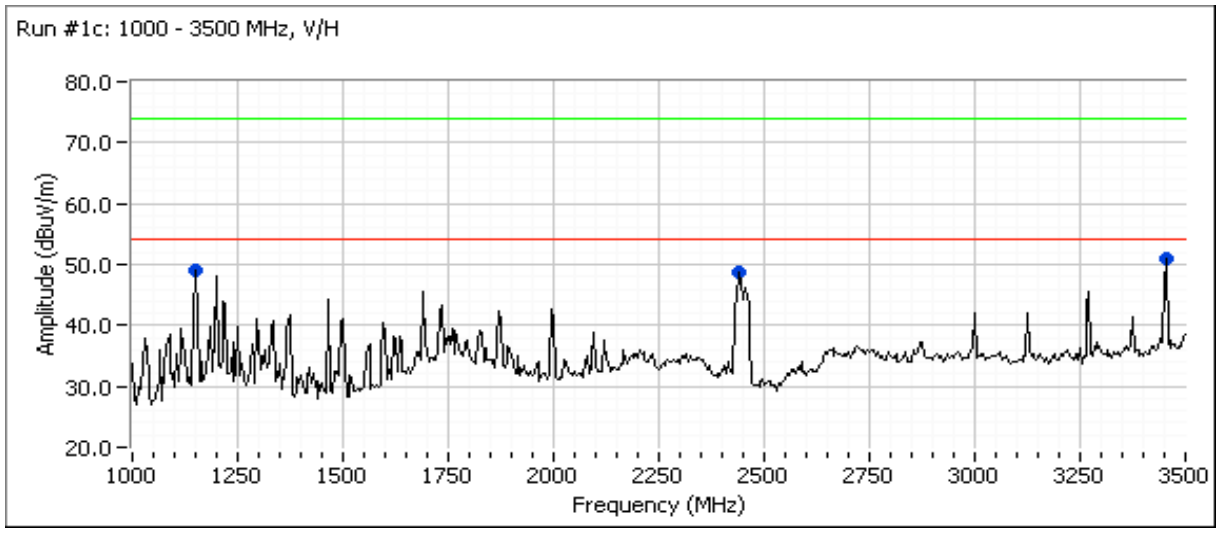
Maximized Readings

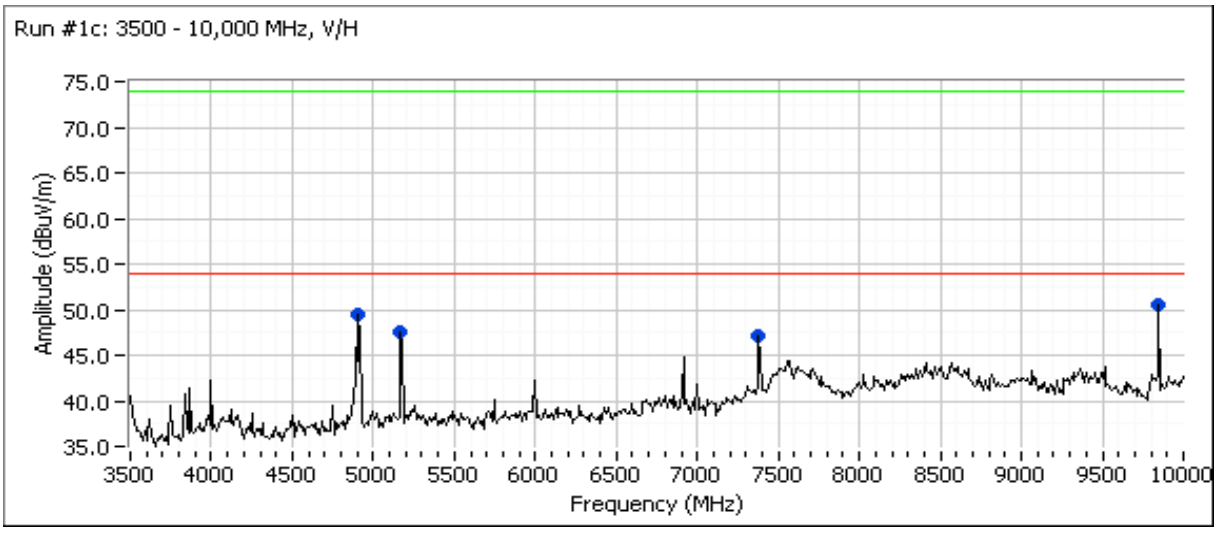
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.320	50.7	H	54.0	-3.3	AVG	110	2.0	
3453.320	52.9	H	74.0	-21.1	PK	110	2.0	
1200.070	48.5	H	54.0	-5.5	AVG	294	2.0	
1200.070	51.2	H	74.0	-22.8	PK	294	2.0	
2420.620	44.5	V	54.0	-9.5	AVG	288	1.0	
2420.620	53.2	V	74.0	-20.8	PK	288	1.0	
4873.970	48.8	V	54.0	-5.2	AVG	253	1.9	
4873.970	54.1	V	74.0	-19.9	PK	253	1.9	

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

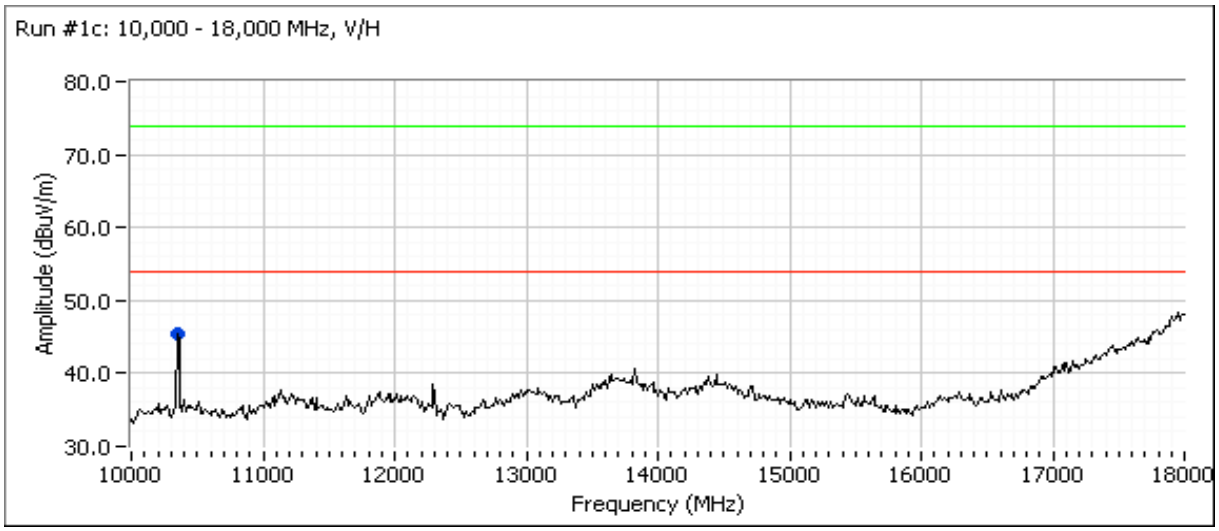
Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1c: High Channel 9 @ 2452 MHz





Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
10346.67	45.3	H	54.0	-8.7	Peak	125	1.0	
1152.040	49.1	V	54.0	-4.9	Peak	222	1.6	
3453.340	50.9	H	54.0	-3.1	Peak	114	2.0	
2439.780	48.6	V	54.0	-5.4	Peak	173	1.3	
4903.940	49.4	V	54.0	-4.6	Peak	239	1.9	
9843.910	50.6	V	54.0	-3.4	Peak	268	1.6	
5168.330	47.5	V	54.0	-6.5	Peak	62	1.3	
7378.330	47.1	V	54.0	-6.9	Peak	19	2.0	
10346.67	45.3	H	54.0	-8.7	Peak	125	1.0	

Maximized Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1150.840	36.8	V	54.0	-17.2	AVG	222	1.6	
1150.840	52.5	V	74.0	-21.5	PK	222	1.6	
3453.220	50.7	H	54.0	-3.3	AVG	113	2.0	
3453.220	52.9	H	74.0	-21.1	PK	113	2.0	
2440.630	40.5	V	54.0	-13.5	AVG	173	1.3	
2440.630	49.1	V	74.0	-24.9	PK	173	1.3	
4903.880	49.3	V	54.0	-4.7	AVG	239	1.9	
4903.880	52.7	V	74.0	-21.3	PK	239	1.9	
9843.310	37.3	V	54.0	-16.7	AVG	268	1.6	
9843.310	48.5	V	74.0	-25.5	PK	268	1.6	

Elliott

EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

RSS 210 and FCC 15.247 Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 3/26/2007
Test Engineer: Rafael Varelas
Test Location: Fremont Chamber #3
Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 20.1 °C
Rel. Humidity: 45 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1 (802.11n Mode) 40MHz SISO	RE, 30 - 18000 MHz - Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	50.0dBµV/m (316.2µV/m) @ 3453.3MHz (-4.0dB)

Modifications Made During Testing:

No modifications were made to the EUT during testing

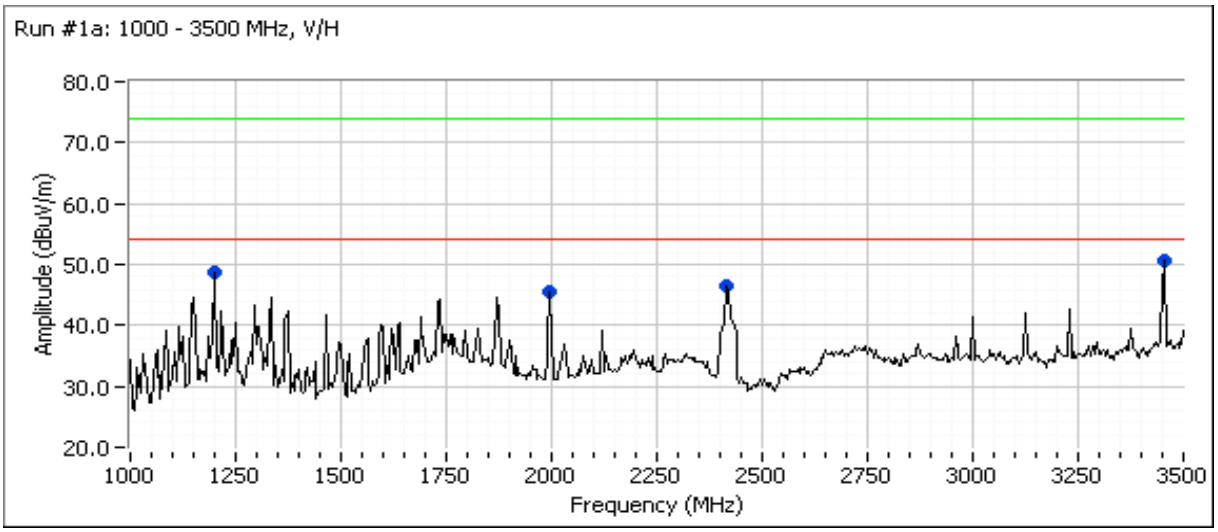
Deviations From The Standard

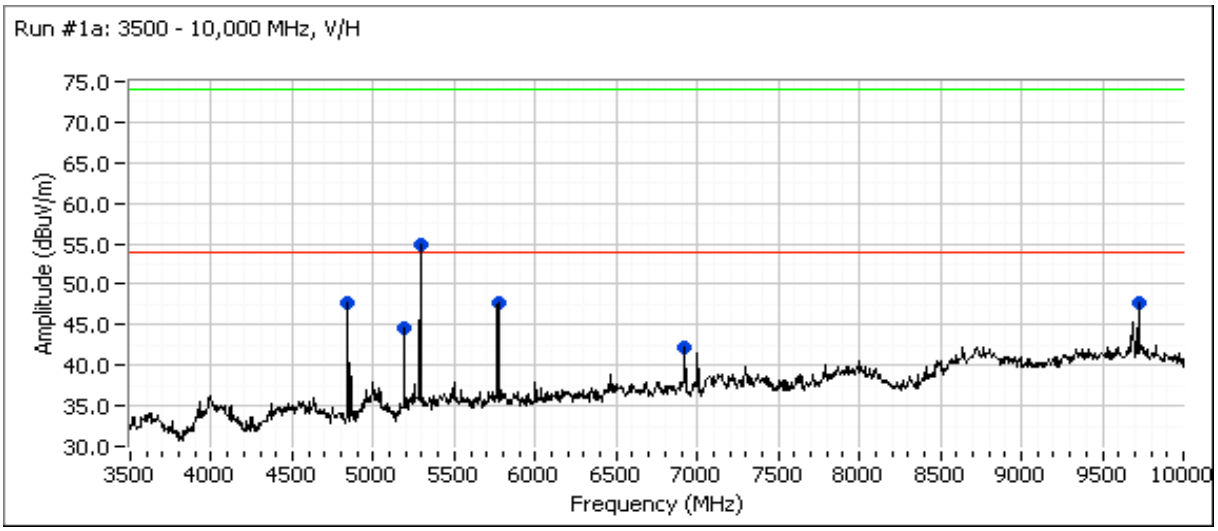
No deviations were made from the requirements of the standard.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1: Radiated Spurious Emissions, 30 - 18000 MHz. Operating Mode: 802.11n

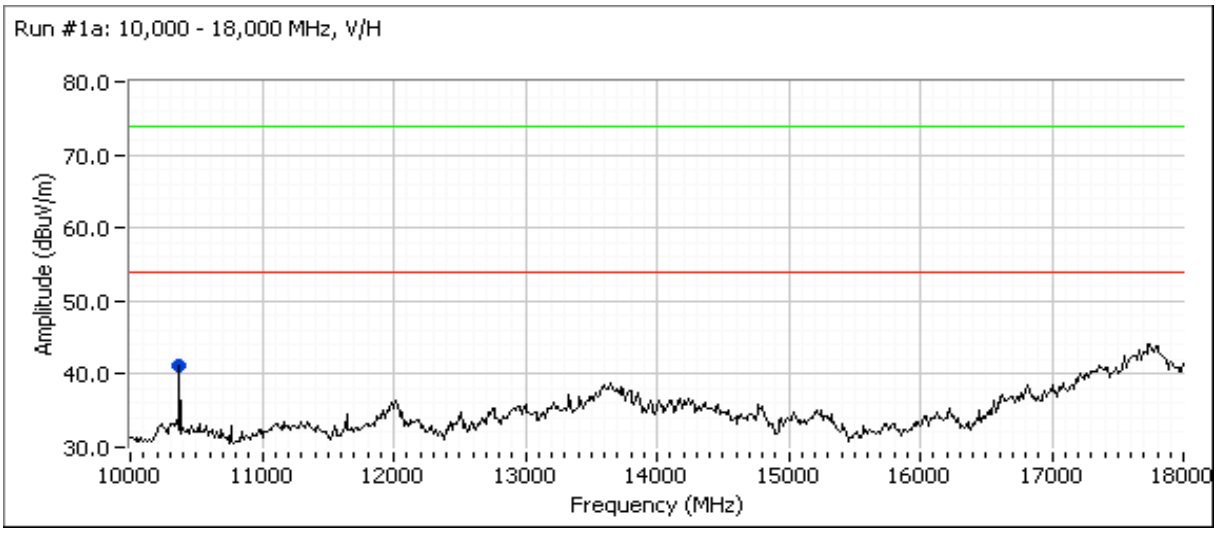
Run #1a: Low Channel 3 @ 2422 MHz





Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1a: Continued



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1200.000	48.8	H	54.0	-5.2	Peak	253	2.0	
3453.340	50.7	H	54.0	-3.3	Peak	129	1.4	Non-restricted
1995.830	45.6	V	54.0	-8.4	Peak	285	1.3	Non-restricted
2412.500	46.4	V	54.0	-7.6	Peak	124	1.3	Non-restricted
4843.980	47.6	V	54.0	-6.4	Peak	49	1.6	
5190.000	44.6	V	54.0	-9.4	Peak	256	1.6	Non-restricted
5270.000	54.9	H	-	-	Peak	103	1.7	Non-restricted
5770.000	47.7	H	54.0	-6.3	Peak	99	1.7	Non-restricted
6920.000	42.2	H	54.0	-11.8	Peak	260	1.4	Non-restricted
9725.830	47.6	V	54.0	-6.4	Peak	269	2.0	Non-restricted
10373.33	41.1	V	54.0	-12.9	Peak	248	1.3	

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1a: Continued

Maximized Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.390	49.9	H	54.0	-4.1	AVG	129	1.4	Non-restricted
3453.390	52.6	H	74.0	-21.4	PK	129	1.4	Non-restricted
1199.990	48.1	H	54.0	-5.9	AVG	252	2.0	
1199.990	50.2	H	74.0	-23.8	PK	252	2.0	
4843.960	45.5	V	54.0	-8.5	AVG	43	1.6	
4843.960	48.0	V	74.0	-26.0	PK	43	1.6	
5270.420	32.6	H	54.0	-21.4	AVG	103	1.7	Non-restricted, random spike
5270.420	44.3	H	74.0	-29.7	PK	103	1.7	Non-restricted, random spike

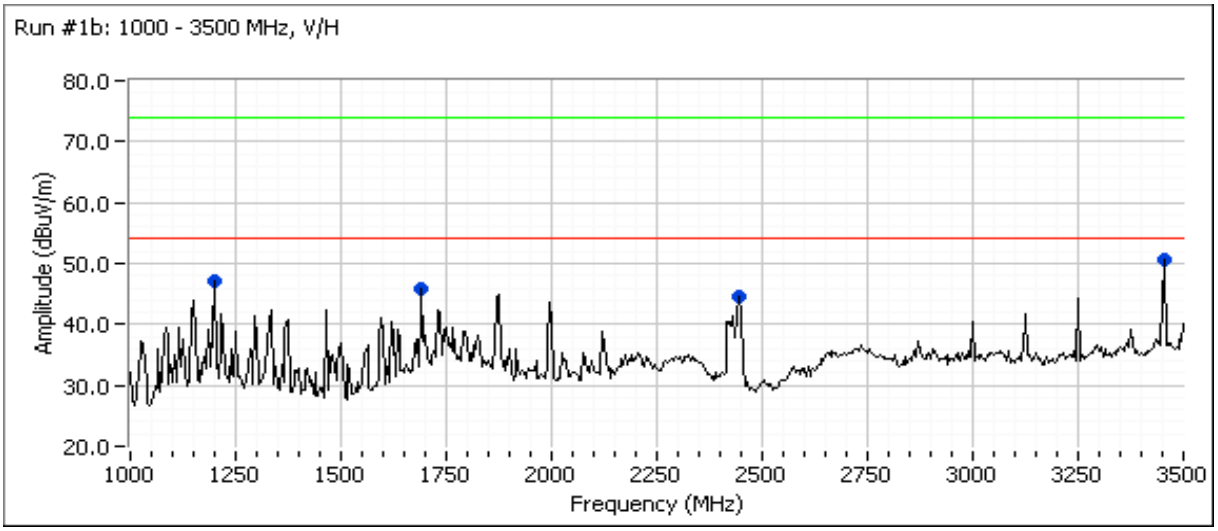
Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

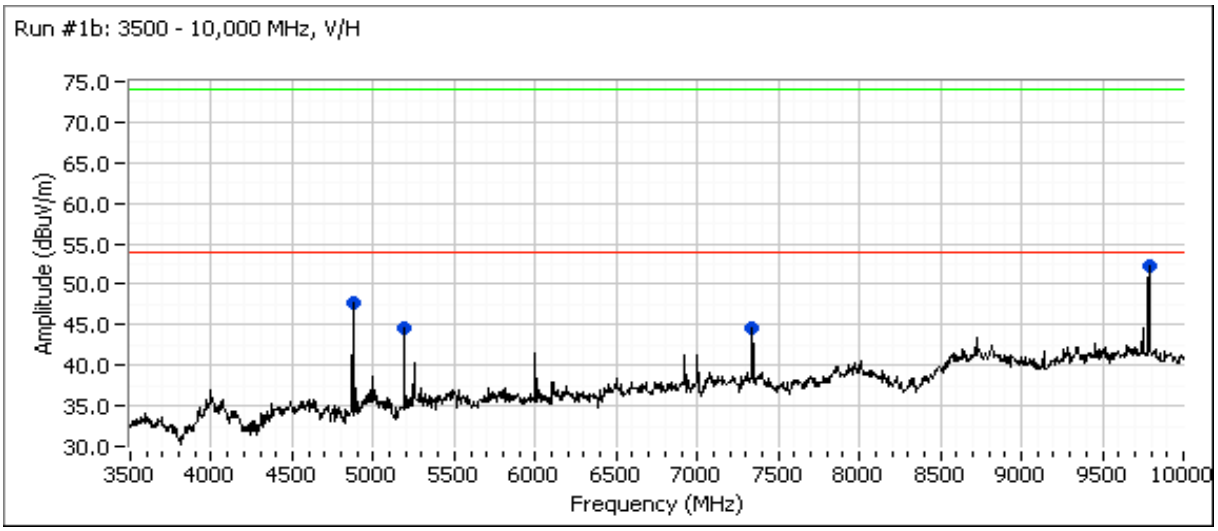
Non-restricted band emissions that exceeded 15.209 limits.
Measurements taken using RBW=VBW=100 kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2448.500	96.2	V	-	-	-	258	1.0	Fundamental
2455.580	97.6	H	-	-	-	288	1.0	Fundamental
5258.200	37.4	V	66.2	-28.8	pk	118	1.0	
5250.130	40.7	H	67.6	-26.9	pk	324	1.0	

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

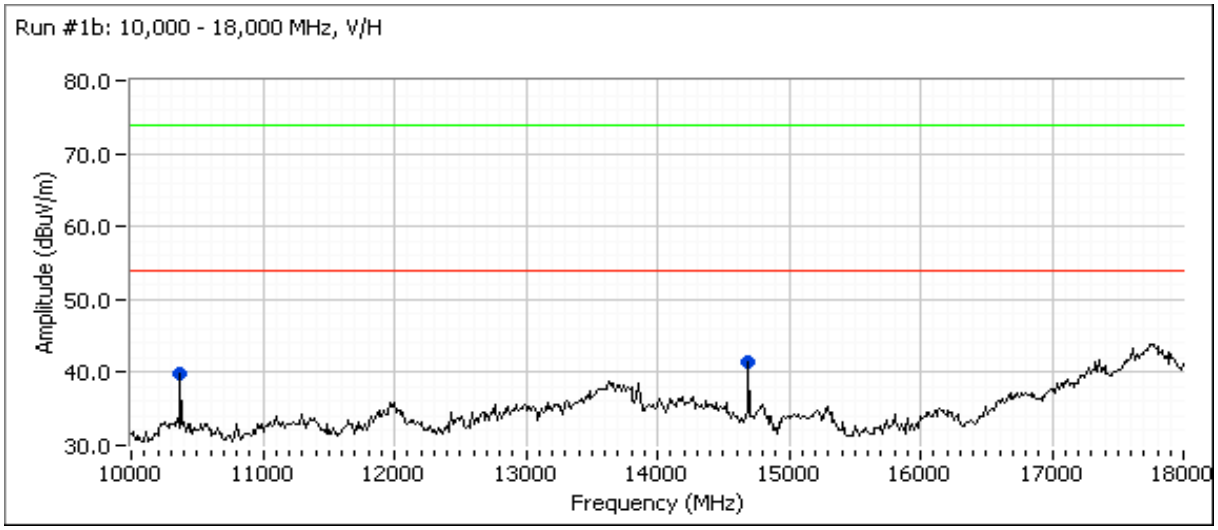
Run #1b: Center Channel 6 @ 2437 MHz





Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.340	50.7	H	54.0	-3.3	Peak	124	1.7	Non-restricted
1200.000	47.0	H	54.0	-7.0	Peak	282	2.0	
1691.670	45.7	V	54.0	-8.3	Peak	244	1.0	
2445.830	44.5	V	54.0	-9.5	Peak	347	1.3	
4874.03	47.7	V	54.0	-6.3	Peak	50	1.6	
5190.00	44.7	V	54.0	-9.3	Peak	256	1.6	
7336.16	44.6	V	54.0	-9.4	Peak	89	1.0	
9791.90	52.3	V	54.0	-1.7	Peak	343	1.6	Non-restricted
10373.33	39.8	V	54.0	-14.2	Peak	227	1.6	
14693.33	41.5	V	54.0	-12.5	Peak	54	1.6	

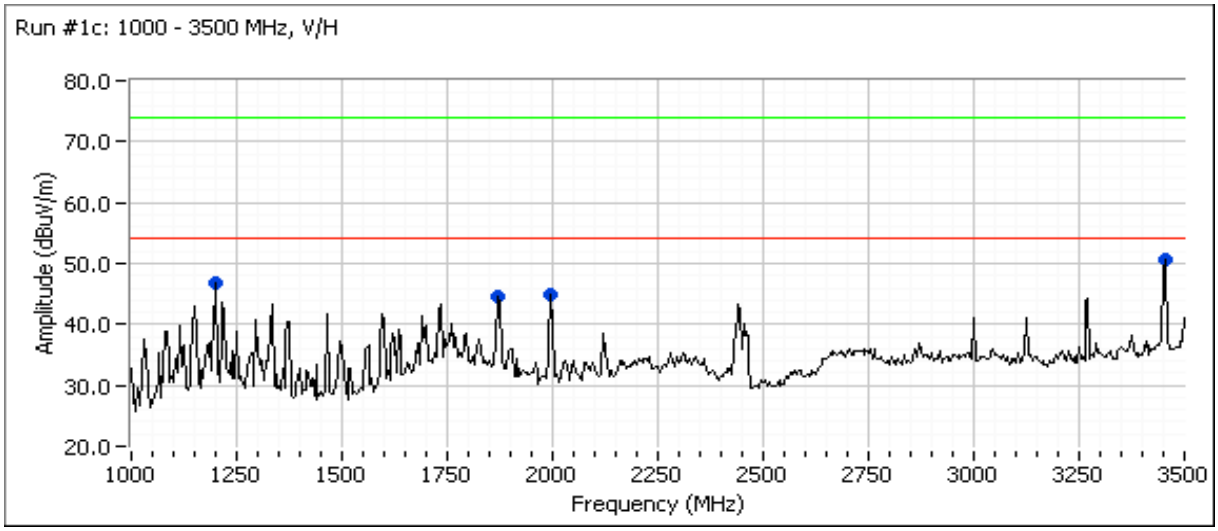
Maximized Readings

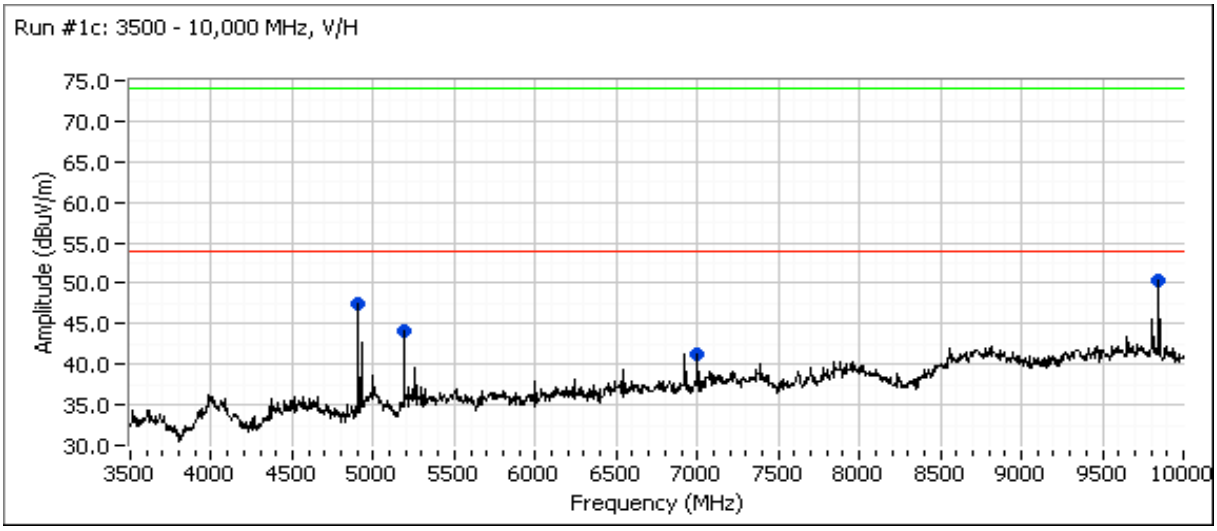
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.250	50.0	H	54.0	-4.0	AVG	124	1.7	Non-restricted
3453.250	52.5	H	74.0	-21.5	PK	124	1.7	Non-restricted
4873.920	46.0	V	54.0	-8.0	AVG	51	1.6	
4873.920	48.8	V	74.0	-25.2	PK	51	1.6	
9791.930	35.2	V	54.0	-18.8	AVG	360	1.0	Non-restricted, random spike
9791.930	46.7	V	74.0	-27.3	PK	360	1.0	Non-restricted, random spike

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

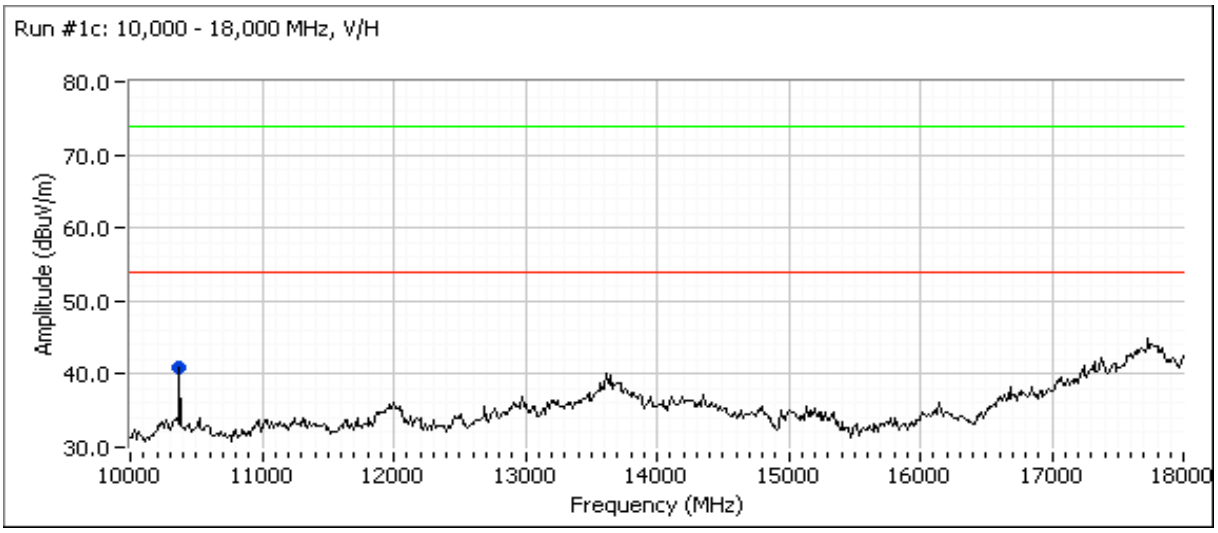
Run #1c: High Channel 9 @ 2452 MHz





Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1c: Continued



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.340	50.6	H	54.0	-3.4	Peak	129	1.7	Non-restricted
1200.000	46.7	H	54.0	-7.3	Peak	260	1.4	
1995.830	45.0	V	54.0	-9.0	Peak	286	1.3	Non-restricted
1870.830	44.5	H	54.0	-9.5	Peak	318	1.4	Non-restricted
4903.980	47.4	V	54.0	-6.6	Peak	53	1.6	
5190.000	44.2	V	54.0	-9.8	Peak	254	1.6	Non-restricted
7001.670	41.2	H	54.0	-12.8	Peak	76	1.1	Non-restricted
9848.330	50.3	V	54.0	-3.7	Peak	78	1.3	Non-restricted
10373.33	40.9	V	54.0	-13.1	Peak	265	1.6	Non-restricted

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1c: Continued

Maximized Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.390	49.2	H	54.0	-4.8	AVG	129	1.7	Non-restricted
3453.390	52.1	H	74.0	-21.9	PK	129	1.7	Non-restricted
4904.010	46.7	V	54.0	-7.3	AVG	54	1.6	
4904.010	49.2	V	74.0	-24.8	PK	54	1.6	
9839.030	36.0	V	54.0	-18.0	AVG	151	1.0	Non-restricted, random spike
9839.030	47.1	V	74.0	-26.9	PK	151	1.0	Non-restricted, random spike

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

RSS 210 and FCC 15.247 Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 3/20/2007
Test Engineer: Rafael Varelas
Test Location: Fremont Chamber #3
Config. Used: 1
Config Change: None
EUT Voltage: 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 20.6 °C
Rel. Humidity: 45 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1 (802.11b Mode)	RE, 30 - 18000 MHz - Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	49.7dBµV/m (305.5µV/m) @ 3453.4MHz (-4.3dB)
2 (802.11g Mode)	RE, 30 - 18000 MHz - Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	49.9dBµV/m (312.6µV/m) @ 3453.2MHz (-4.1dB)

Modifications Made During Testing:

No modifications were made to the EUT during testing

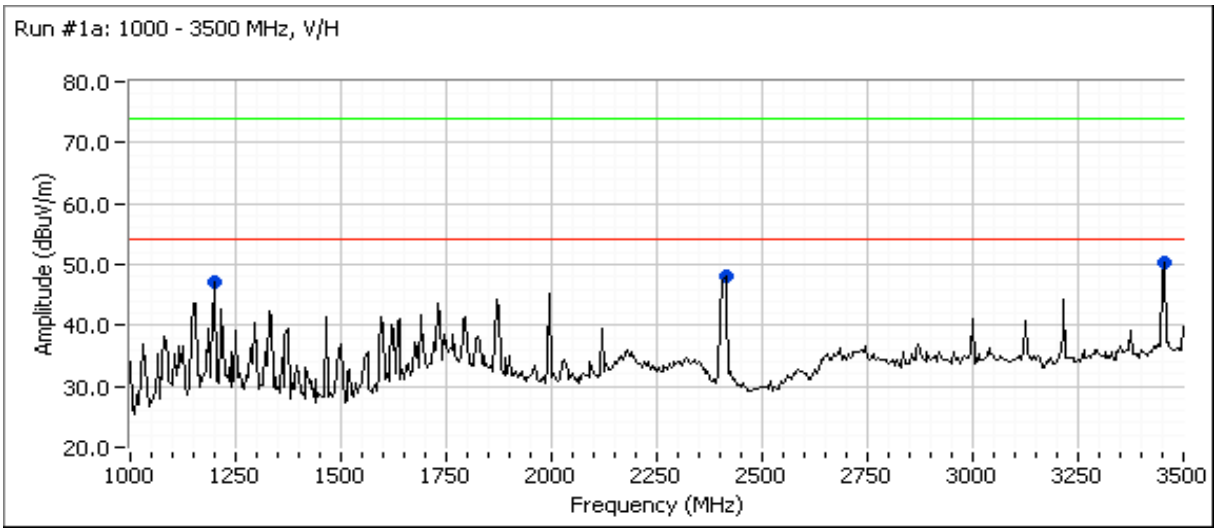
Deviations From The Standard

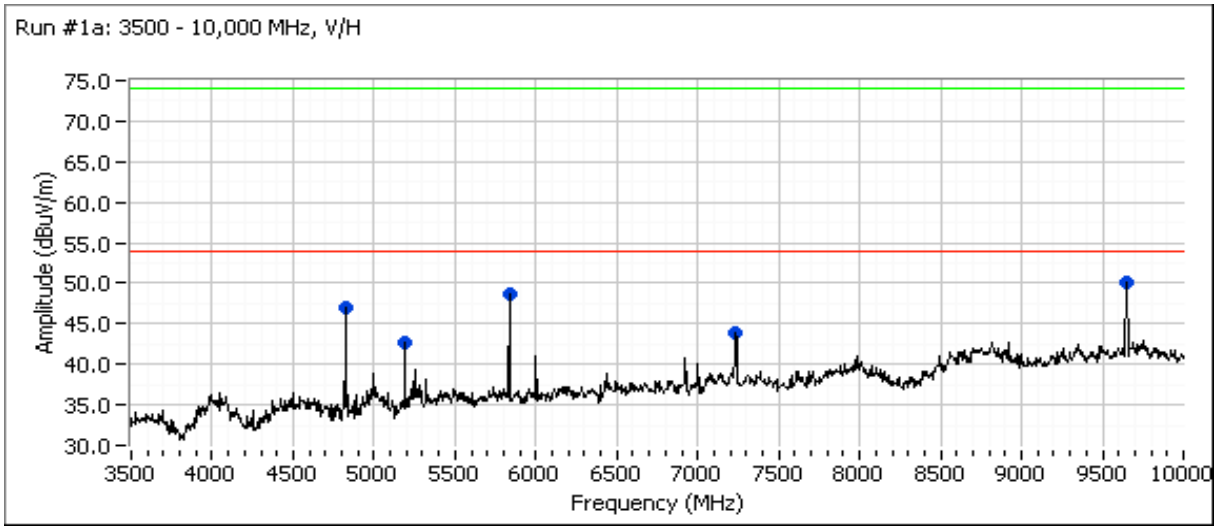
No deviations were made from the requirements of the standard.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #1: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11b

Run #1a: Low Channel 1 @ 2412 MHz

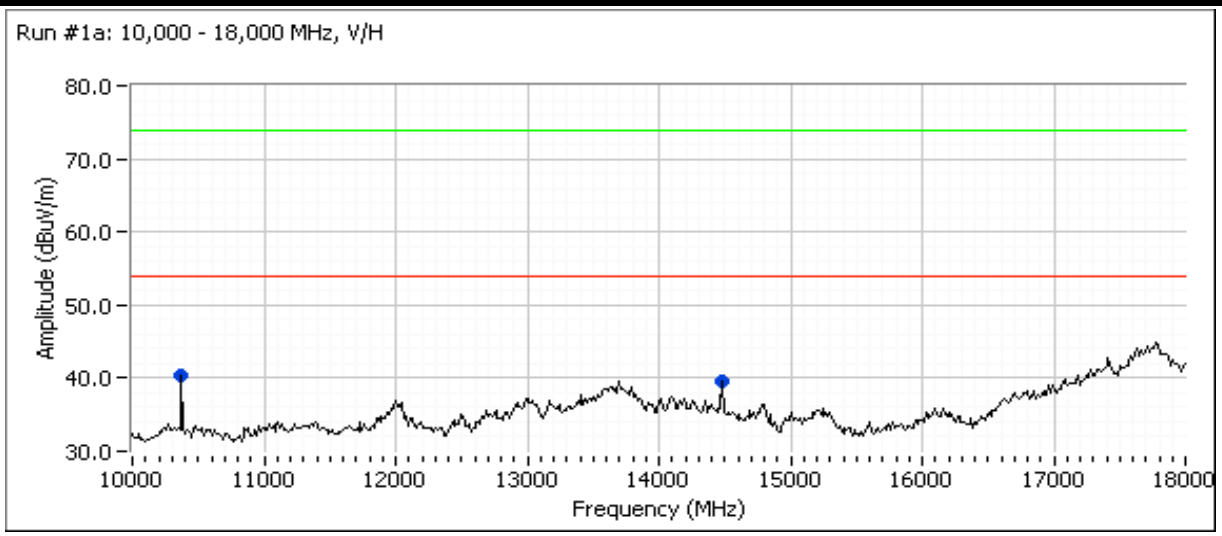




Elliott

EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1200.000	47.0	H	54.0	-7.0	Peak	267	2.0	
2414.790	48.2	V	54.0	-5.8	Peak	222	1.0	Non-restricted
3453.340	50.4	H	54.0	-3.6	Peak	135	1.4	Non-restricted
4824.000	47.1	V	54.0	-6.9	Peak	111	1.3	
5835.000	48.7	V	54.0	-5.3	Peak	75	2.2	Non-restricted
5190.000	42.7	V	54.0	-11.3	Peak	265	1.6	Non-restricted
7235.000	43.8	V	54.0	-10.2	Peak	94	1.3	Non-restricted
9648.000	50.1	V	54.0	-3.9	Peak	96	1.6	Non-restricted
10373.33	40.4	H	54.0	-13.6	Peak	275	1.3	Non-restricted
14480.00	39.7	V	54.0	-14.3	Peak	67	1.0	

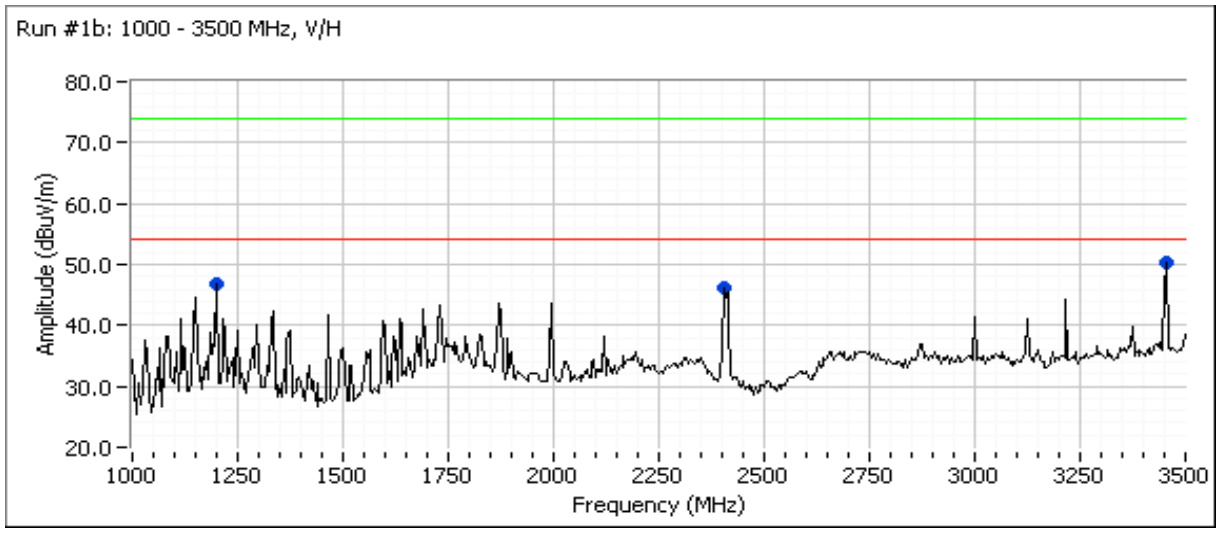
Maximized Readings

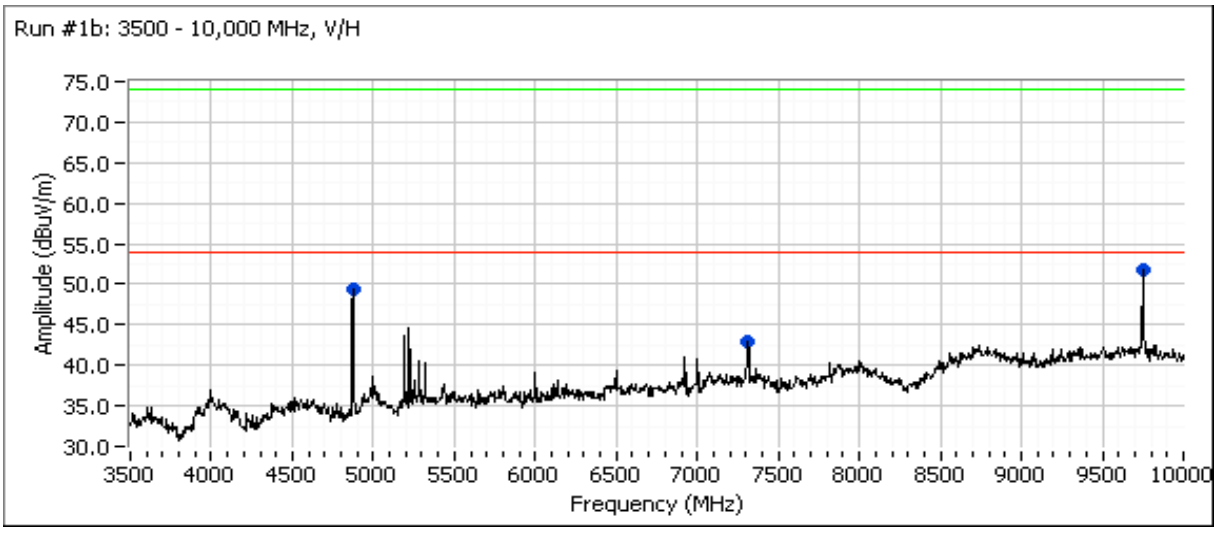
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.400	49.7	H	54.0	-4.3	AVG	135	1.4	Non-restricted
3453.400	52.0	H	74.0	-22.0	PK	135	1.4	Non-restricted
2414.600	39.3	V	54.0	-14.7	AVG	222	1.0	Non-restricted
2414.600	45.8	V	74.0	-28.2	PK	222	1.0	Non-restricted
4824.040	45.8	V	54.0	-8.2	AVG	108	1.3	
4824.040	48.6	V	74.0	-25.4	PK	108	1.3	
9647.670	45.4	V	54.0	-8.6	AVG	305	1.7	Non-restricted
9647.670	50.7	V	74.0	-23.3	PK	305	1.7	Non-restricted

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

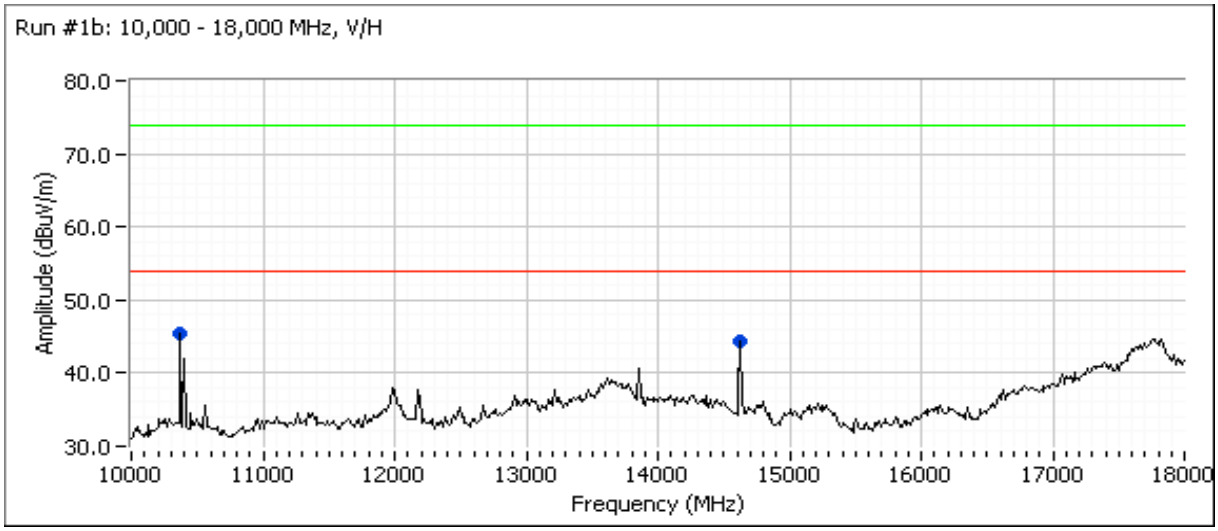
Run #1b: Center Channel 6 @ 2437 MHz





Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1200.000	46.7	H	54.0	-7.3	Peak	286	2.0	
2404.170	46.1	V	54.0	-7.9	Peak	309	1.3	
3453.340	50.2	H	54.0	-3.8	Peak	140	1.4	Non-restricted
4874.000	49.5	V	54.0	-4.5	Peak	66	1.3	
7310.830	43.0	V	54.0	-11.0	Peak	67	1.3	
9748.000	51.8	H	54.0	-2.2	Peak	68	1.0	Non-restricted
10373.33	45.4	H	54.0	-8.6	Peak	271	1.0	Non-restricted
14626.67	44.3	V	54.0	-9.7	Peak	62	1.0	Non-restricted

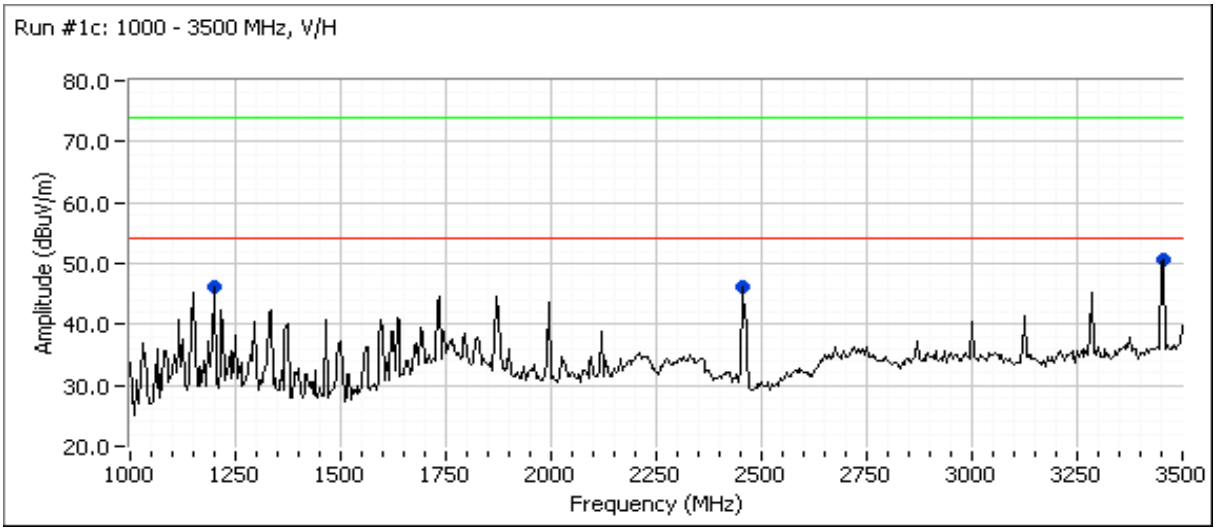
Maximized Readings

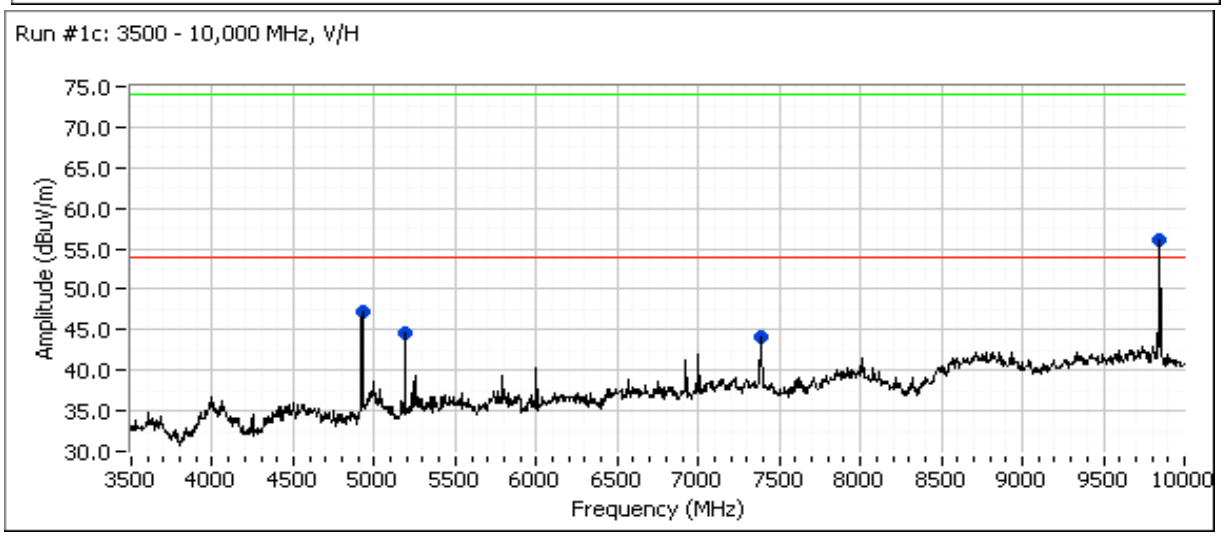
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.350	49.0	H	54.0	-5.0	AVG	140	1.4	Non-restricted
3453.350	52.0	H	74.0	-22.0	PK	140	1.4	Non-restricted
4873.940	48.1	V	54.0	-5.9	AVG	68	1.3	
4873.940	50.4	V	74.0	-23.6	PK	68	1.3	
9747.850	44.7	H	54.0	-9.3	AVG	206	1.0	Non-restricted
9747.850	50.7	H	74.0	-23.3	PK	206	1.0	Non-restricted

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

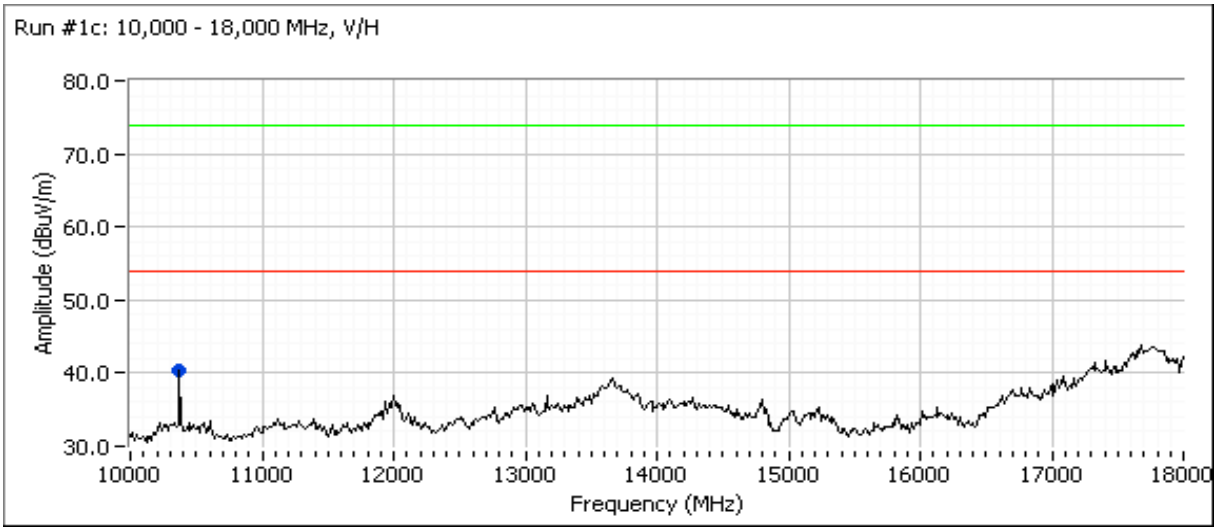
Run #1c: High Channel 11 @ 2462 MHz





Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.380	50.6	H	54.0	-3.4	Peak	141	1.4	Non-restricted
1200.000	46.3	H	54.0	-7.7	Peak	261	2.0	
2454.170	46.2	V	54.0	-7.8	Peak	295	1.3	
4923.980	47.2	V	54.0	-6.8	Peak	81	1.9	
5190.000	44.6	V	54.0	-9.4	Peak	255	1.6	
7386.670	44.1	V	54.0	-9.9	Peak	91	1.3	
9848.330	56.2	V	-	-	Peak	91	1.0	Non-restricted
10373.33	40.3	V	54.0	-13.7	Peak	235	1.3	Non-restricted

Maximized Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.300	49.1	H	54.0	-4.9	AVG	140	1.4	Non-restricted
3453.300	51.8	H	74.0	-22.2	PK	140	1.4	Non-restricted
4923.900	48.9	V	54.0	-5.1	AVG	80	1.4	
4923.900	51.8	V	74.0	-22.2	PK	80	1.4	

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Non-restricted band emissions that exceeded 15.209 limits.
Measurements taken using RBW=VBW=100 kHz

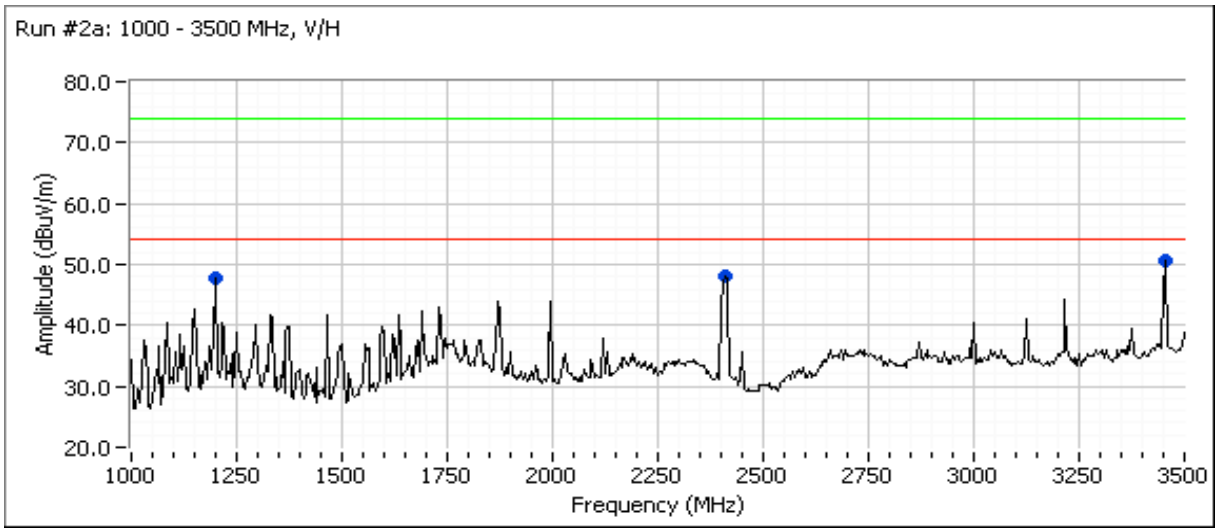
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2459.150	103.0	V	-	-	-	307	1.0	Fundamental
2461.200	100.3	H	-	-	-	225	1.0	Fundamental
9847.920	53.5	V	83.0	-29.5	pk	342	1.0	
9847.870	54.3	H	80.3	-26.0	pk	293	1.0	

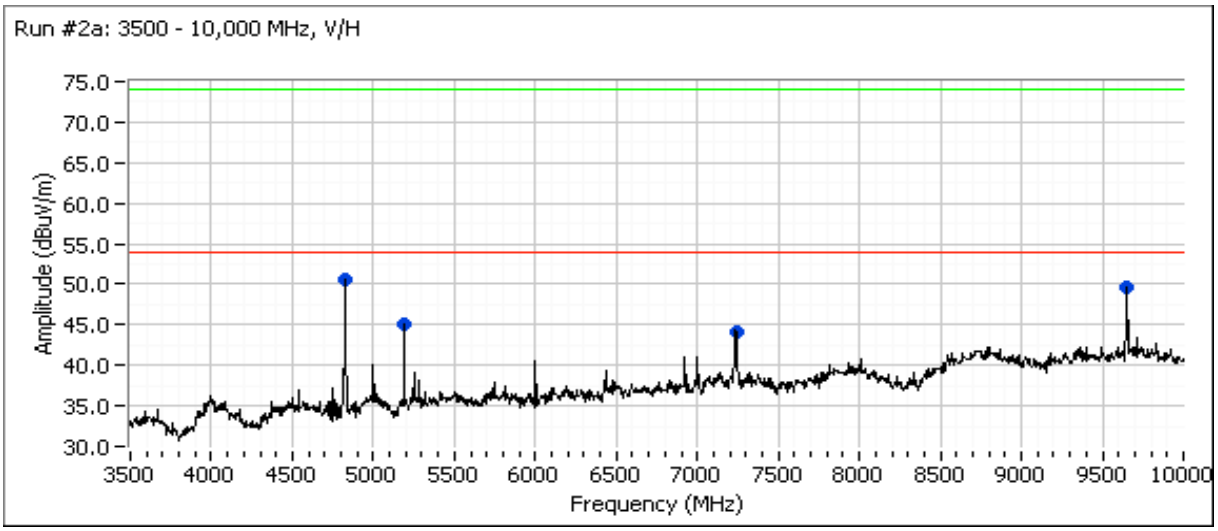
Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

Run #2: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11g

Run #2a: Low Channel 1 @ 2412 MHz

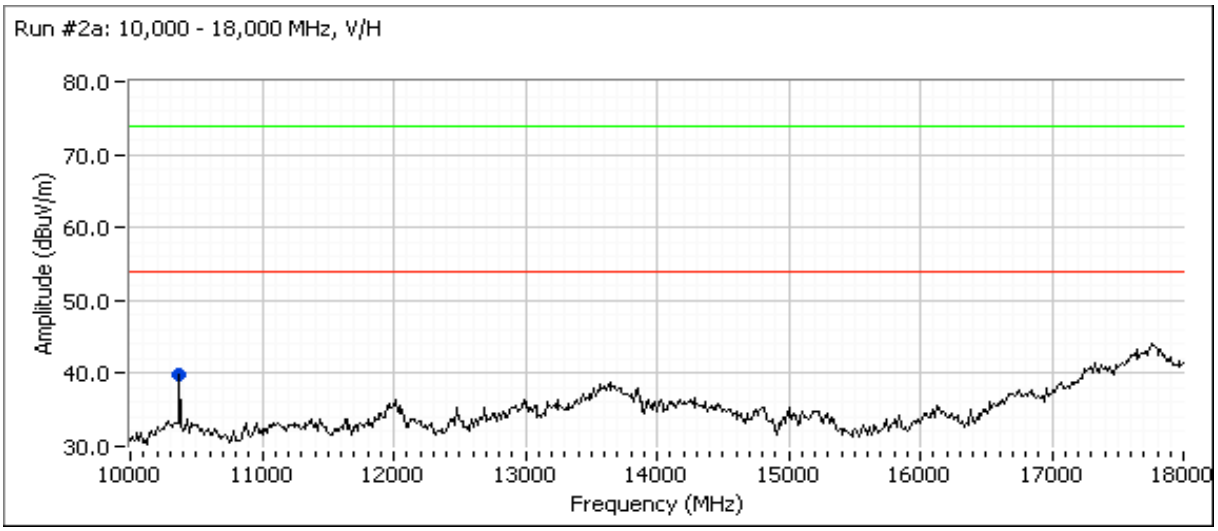




Elliott

EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1200.000	47.8	H	54.0	-6.2	Peak	295	1.4	
2408.330	48.2	H	54.0	-5.8	Peak	258	1.4	
3453.340	50.7	H	54.0	-3.3	Peak	134	1.4	Non-restricted
4823.980	50.6	V	54.0	-3.4	Peak	55	1.3	
5190.000	45.1	V	54.0	-8.9	Peak	255	1.6	Non-restricted
7240.830	44.1	V	54.0	-9.9	Peak	64	1.9	Non-restricted
9650.000	49.6	V	54.0	-4.4	Peak	107	1.0	Non-restricted
10373.33	39.8	V	54.0	-14.2	Peak	232	1.3	Non-restricted

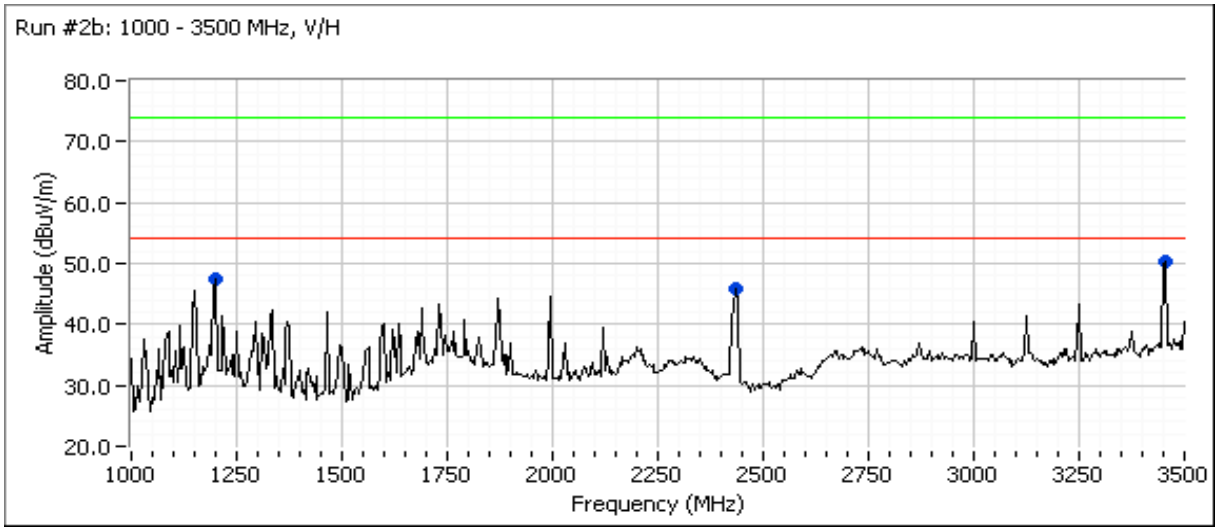
Maximized Readings

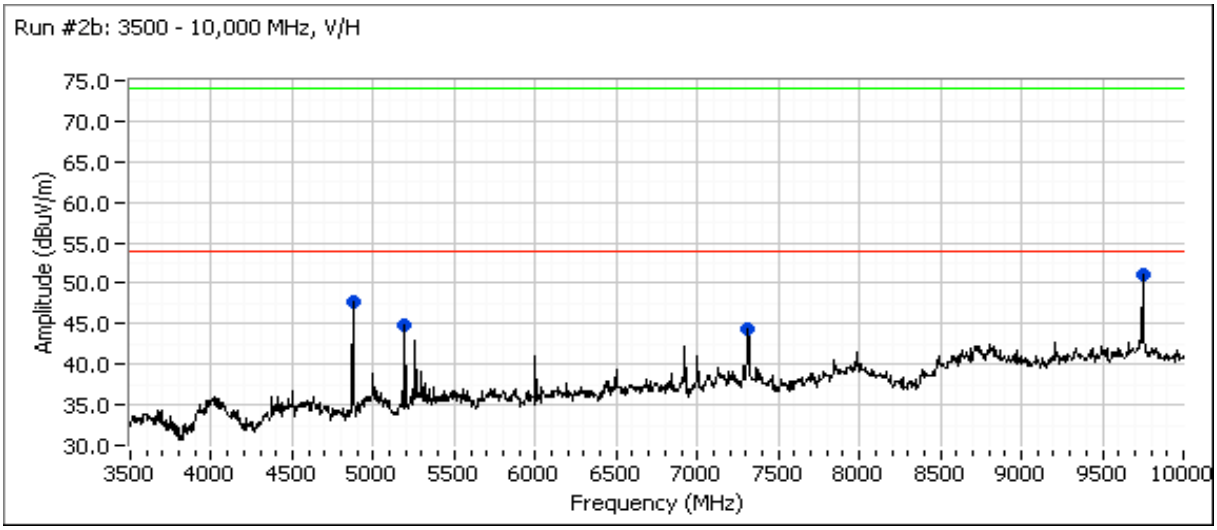
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.200	49.9	H	54.0	-4.1	AVG	133	1.4	Non-restricted
3453.200	52.5	H	74.0	-21.5	PK	133	1.4	Non-restricted
4823.960	43.2	V	54.0	-10.8	AVG	56	1.3	
4823.960	48.8	V	74.0	-25.2	PK	56	1.3	
9646.820	37.5	V	54.0	-16.5	AVG	212	1.0	Non-restricted
9646.820	48.2	V	74.0	-25.8	PK	212	1.0	Non-restricted

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

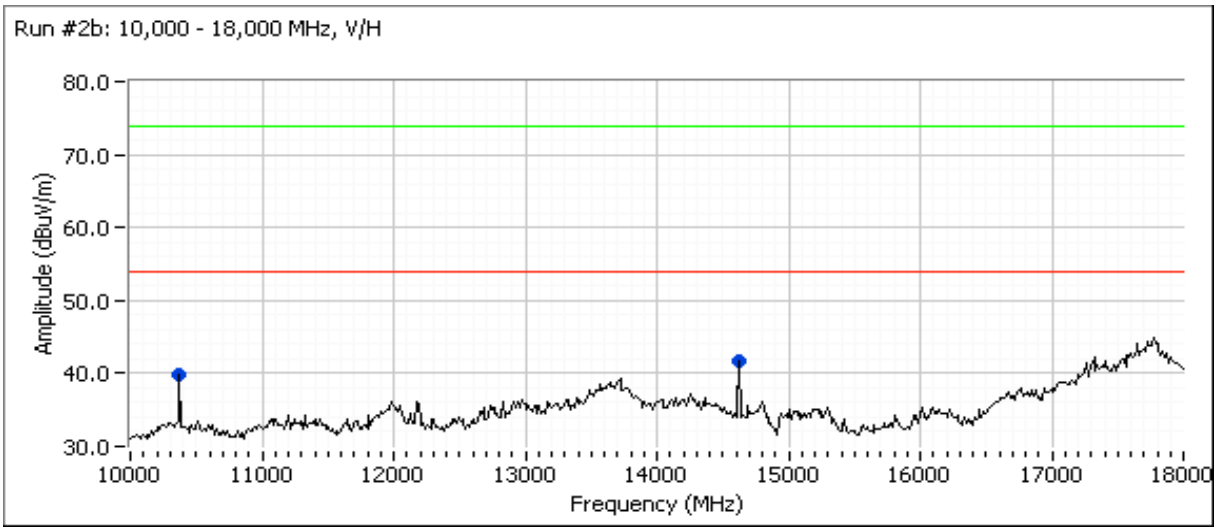
Run #2b: Center Channel 6 @ 2437 MHz





Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.340	50.4	H	54.0	-3.6	Peak	142	1.4	Non-restricted
1200.000	47.3	H	54.0	-6.7	Peak	269	2.0	
2412.500	47.5	H	54.0	-6.5	Peak	240	1.0	
4874.000	47.7	V	54.0	-6.3	Peak	83	1.6	
5190.000	44.9	V	54.0	-9.1	Peak	257	1.6	Non-restricted
7310.830	44.4	V	54.0	-9.6	Peak	29	2.5	
9749.170	51.1	V	54.0	-2.9	Peak	87	1.6	Non-restricted
10373.33	39.9	V	54.0	-14.1	Peak	259	1.6	Non-restricted
14626.67	41.7	V	54.0	-12.3	Peak	192	1.6	Non-restricted

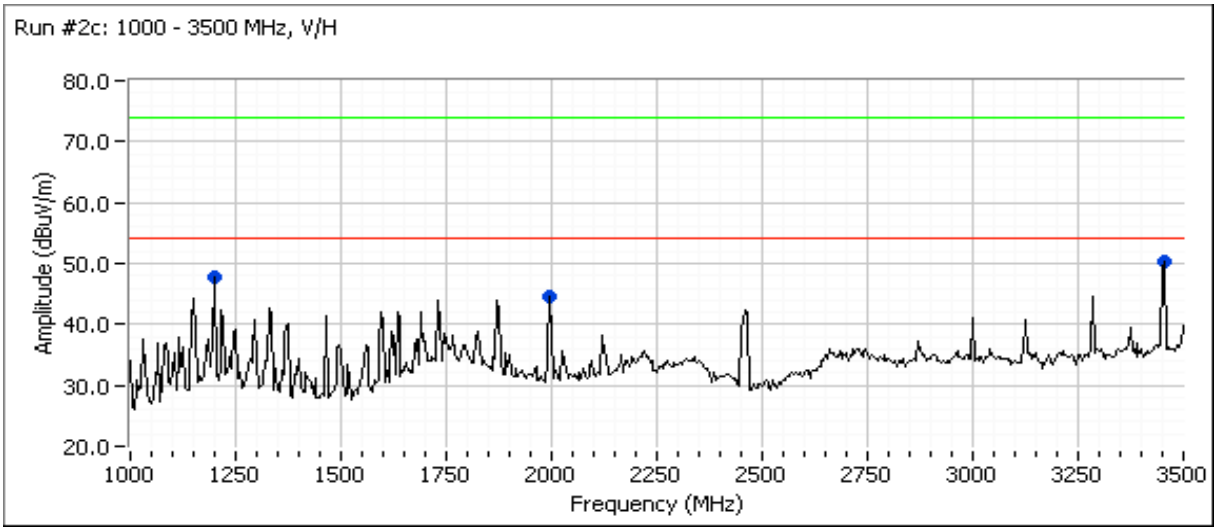
Maximized Readings

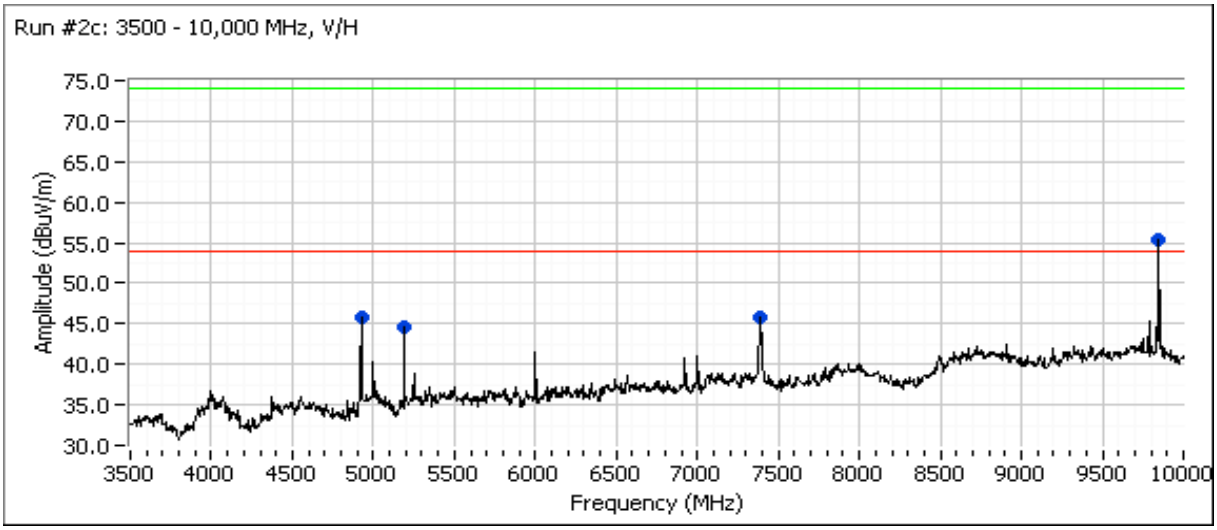
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.410	49.0	H	54.0	-5.0	AVG	141	1.4	Non-restricted
3453.410	51.5	H	74.0	-22.5	PK	141	1.4	Non-restricted
4874.090	46.5	V	54.0	-7.5	AVG	81	1.6	
4874.090	50.4	V	74.0	-23.6	PK	81	1.6	
9747.930	37.0	V	54.0	-17.0	AVG	360	1.0	Non-restricted
9747.930	46.8	V	74.0	-27.2	PK	360	1.0	Non-restricted

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A

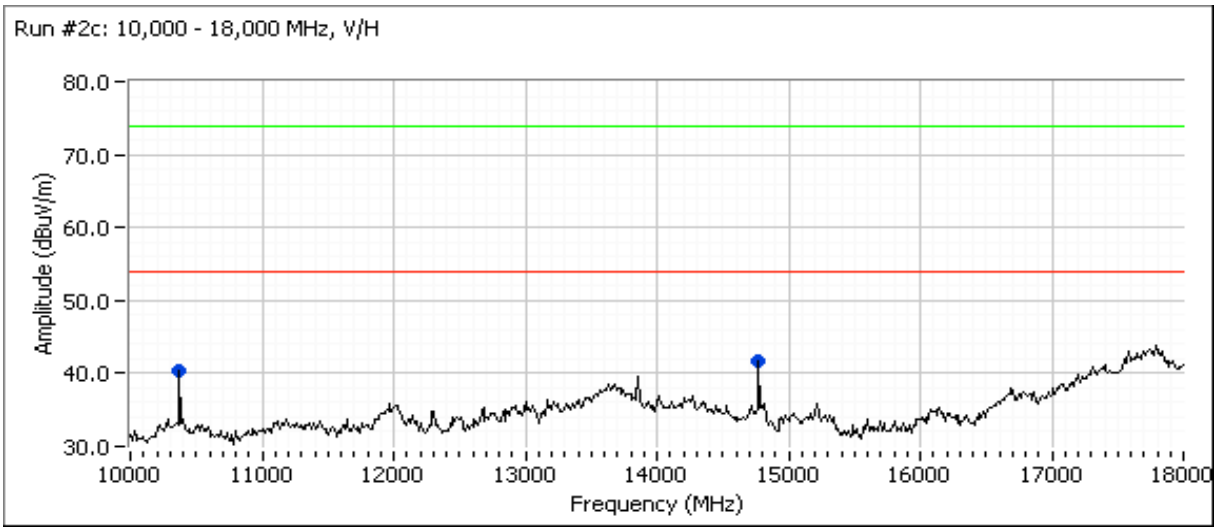
Run #2c: High Channel 11 @ 2462 MHz





Elliott — EMC Test Data

Client:	Cisco-Linksys	Job Number:	J67313
Model:	WRT600N	T-Log Number:	T67324
		Account Manager:	-
Contact:	Kevin Lee		
Standard:	FCC 15.247	Class:	N/A



Preliminary Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1200.000	47.8	H	54.0	-6.2	Peak	266	2.0	
1995.830	44.6	V	54.0	-9.4	Peak	283	1.3	
3453.340	50.2	H	54.0	-3.8	Peak	138	1.4	Non-restricted
4923.980	45.7	V	54.0	-8.3	Peak	79	1.3	
5190.000	44.6	V	54.0	-9.4	Peak	257	1.6	Non-restricted
7392.500	45.7	V	54.0	-8.3	Peak	86	2.2	
9848.000	55.3	V	54.0	1.3	Peak	271	1.6	Non-restricted
10373.33	40.4	V	54.0	-13.6	Peak	227	1.3	Non-restricted
14773.33	41.6	V	54.0	-12.4	Peak	77	1.3	Non-restricted

Maximized Readings

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3453.340	49.1	H	54.0	-4.9	AVG	138	1.4	Non-restricted
3453.340	51.6	H	74.0	-22.4	PK	138	1.4	Non-restricted
4924.280	43.5	V	54.0	-10.5	AVG	81	1.3	
4924.280	48.2	V	74.0	-25.8	PK	81	1.3	
9848.280	38.7	V	54.0	-15.3	AVG	143	1.0	Non-restricted
9848.280	48.1	V	74.0	-25.9	PK	143	1.0	Non-restricted

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	No spurious emission, being 20-dB of the limit, were detected above 18GHz.

EXHIBIT 3: Photographs of Test Configurations

1 Page

EXHIBIT 4: Proposed FCC ID Label & Label Location

EXHIBIT 5: Detailed Photographs of Cisco-Linksys Model WRT600NConstruction

Pages

EXHIBIT 6: Operator's Manual for Cisco-Linksys Model WRT600N

Pages

EXHIBIT 7: Block Diagram of Cisco-Linksys Model WRT600N

Pages

EXHIBIT 8: Schematic Diagrams for Cisco-Linksys Model WRT600N

Pages

EXHIBIT 9: Theory of Operation for Cisco-Linksys Model WRT600N

Pages

EXHIBIT 10: RF Exposure Information

Pages